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SAFE DRINKING WATER AMENDMENTS OF 1985

HEARING

BEFORE THE

SUBCOMMITTEE ON TOXIC SUBSTANCES AND ENVIRONMENTAL OVERSIGHT

OF THE

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS UNITED STATES SENATE

NINETY-NINTH CONGRESS

FIRST SESSION

ON

S. 124

A BILL ENTITLED THE "SAFE DRINKING WATER AMENDMENTS OF 1985"

MARCH 21, 1985

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SAFE DRINKING WATER AMENDMENTS OF 1985

THURSDAY, MARCH 21, 1985

U.S. SENATE,
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS,
SUBCOMMITTEE ON TOXIC SUBSTANCES AND
ENVIRONMENTAL OVERSIGHT,
Washington, DC.

The subcommittee met at 10 a.m., in room SD-406, Dirksen Senate Office Building, Hon. Dave Durenberger (chairman of the subcommittee) presiding.

Present: Senators Durenberger and Baucus.

OPENING STATEMENT OF HON. DAVE DURENBERGER, U.S. SENATOR FROM THE STATE OF MINNESOTA

Senator DURENBERGER. I would like to begin by welcoming everyone to the first meeting of the Subcommittee on Toxic Substances and Environmental Oversight of the 99th Congress. I am pleased to have the honor of chairing this subcommittee for another 2 years.

This is also the subcommittee's first and only hearing on the subject of the Safe Drinking Water Act amendments. The purpose of the hearing is to receive comments on the specific provisions of the bill, S. 124, introduced by the chairman of the committee, Bob Stafford, Senator Humphrey, Senator Baucus, and myself.

Witnesses have also been requested to comment on two independent amendments pertaining to the basis of drinking water standard setting and judicial review of regulations.

The bill that serves as the focus of today's discussion is virtually the same bill reported by the Committee on Environment and Public Works in September of last year.

Therefore, we all are familiar with the issues addressed by the bill and a number of today's witnesses testified on our original bill, S. 2649 last year. We are not expecting many surprises today because there have been few substantial changes in the bill.

What has changed since last year is an increased interest in the legislation. I believe this is due to the ever increasing awareness of incidents of drinking water contamination throughout the country and the public's expectation that their representatives will respond with the reauthorization of the Safe Drinking Water Act that provides the necessary tools to ensure that public health is protected.

The most vital tasks to be accomplished by this proposed bill are: One, to expedite the drinking water standard setting process which provides the regulatory foundation for the drinking water program; two, to establish a monitoring program for unregulated contami-

nants so that problems can be identified as soon as possible; and three, to provide EPA the necessary enforcement tools to ensure compliance with regulation.

In addition, the bill would enhance underground drinking water protection under the act by requiring the monitoring of ground water at deep well hazardous waste injection sites unless it is shown, by an EPA report, that it is not necessary.

I want to make it clear that this is not our answer to the severe ground water contamination problems that the entire Nation faces but rather an effort to support ground water protection measures in areas where aquifers are particularly vulnerable to contamination and where the need for immediate action is critical because of the lack of alternative sources of drinking water.

Of course, we are all now aware that ground water is a vital resource in every State and we must address ourselves to the problem of protecting these essential supplies from further contamination and to controlling the unregulated source of contamination.

Determining the proper course of action will require thoughtful discussion of this complex issue in a public forum where the diverse groups involved in, and impacted by, this problem may participate.

Therefore, it is my intention to hold such hearings before this subcommittee later this spring, as a basis for the development of a national ground water protection bill. However, our efforts in ground water protection will not impede the passage of safe drinking water amendments.

The amendments before us today represent constructive and vital changes in the statutory framework intended to ensure that the Nation's citizens are protected from contaminants found in drinking water. Action on this legislation has been designated as one of the legislative priorities of this committee. So I expect the bill to be reported by the committee and to be acted upon by the Senate within the next 2 months.

I wish to thank the witnesses for appearing today to provide us with their views on the proposed legislation. I look forward to continuing our efforts together in the upcoming weeks to pass a bill which will allow us to answer in the affirmative when asked, "Is our water safe to drink?"

Our first witness is Mr. Jack Ravan, Assistant Administrator for Water of the Environmental Protection Agency.

Jack, obviously, you are a most welcome and a most helpful witness. You may proceed with your statement.

STATEMENT OF JACK RAVAN, ASSISTANT ADMINISTRATOR FOR WATER, ENVIRONMENTAL PROTECTION AGENCY; ACCOMPANIED BY DR. ARNOLD M. KUZMACK, DEPUTY DIRECTOR, OFFICE OF DRINKING WATER

Mr. RAVAN. Thank you very much, Mr. Chairman. With me today is Dr. Arnold Kuzmack, Deputy Director of our Office for Drinking Water.

Mr. Chairman, with your permission, I will try to do the best job I can for you this morning. I would like to call upon Dr. Joe Cotruvo and other members of our staff that are here with me to give

you the best evidence quickly. Anything that we cannot produce this morning, we will be happy to submit for the record.

I want to skip quickly to the bottom of page 1 and I may skip other portions and I will try to identify those for the chairman, as I move quickly through the statement. It is fairly short, Mr. Chairman, and I would like to get it into the record, verbally, if I may.

Senator DURENBERGER. Your statement, in full, will be made part of the record.

Mr. RAVAN. Thank you, sir. Let me begin then, with some of the good news. First of all, the report on the progress to date since I last appeared before this committee in, I think, June of last year.

Senator DURENBERGER. Max, do you want to make an opening statement? Or do you want to wait until after?

Senator BAUCUS. I will wait until after.

Senator DURENBERGER. OK. I am sorry, go ahead.

Mr. RAVAN. Thank you, sir. The State of Pennsylvania took on primary enforcement responsibility for its public water supply supervision in February of this year. It becomes the 53d primacy jurisdiction on the ground water side. Eight additional States have taken on underground injection control primacy since June 1, 1984.

Let me quickly identify those States, because I think it is great progress: Nebraska, Vermont, South Carolina, Rhode Island, Washington, North Dakota, Oregon, and Ohio. In addition, South Dakota has assumed partial primacy. This brings our total, then, of the number of States with full UIC primacy to 30 and the number with partial primacy to six.

The rest operate under direct implementation programs. The direct implementation program took effect within the last 8 months, as you recall. UIC program implementation is now in earnest, as far as the EPA is concerned. In the next few years I believe significant improvement in ground water protection will be seen because of this program.

Some important advances have taken place also here in Washington. Let me identify those. We are now reviewing comments on the NPRM which we published in the Federal Register proposing recommended maximum contaminant levels, RMCL's, for the phase I volatile organic contaminants. We expect to complete our review of these comments early this summer and to the extent necessary draft appropriate enforceable MCL's for proposal shortly thereafter.

We are also seriously considering an expanded monitoring program for unregulated contaminants. This would apply to volatile chemicals which could be monitored inexpensively in conjunction with the monitoring of the chemicals which may need regulation after this review.

Mr. Chairman, as we discussed last June, we are pursuing the formulations of a scheme to monitor for unregulated contaminants. However, as I reported to you then and as I have experienced since then, this is a very complex process, one which should be approached with a great deal of wisdom. And most importantly, when we identify these substances, we ought to be able to tell the public the associated health consequences.

Another problem to be overcome when examining unregulated contaminants is confidence in the analytical chemistry which will

be done. We plan to stage the monitoring, then, in order to ensure competent analysis and so as not to overwhelm the analytical capability that exists at the present time. This will also permit midcourse correction and will allow improvement of analytical methods during the process.

This monitoring for volatile contaminants is a part of an initiative on unregulated contaminants we have been pursuing actively since our discussions with the subcommittee last June.

We are also undertaking a major survey that I would like to mention. The National Inorganic and Radiation Survey, which we call NIRS, is a 2-year project that will give us information on the level and frequency of drinking water contamination due to inorganic and radioactive chemicals.

The data necessary is to help determine whether, and at what levels, to regulate radon and other radioactive chemicals. We have about 30 percent of the samples in and the results of the survey will certainly help us in phase III.

In addition to this project, we are seriously considering a second major survey which I would like to mention. The survey would have to be especially sophisticated, due to the wide variety of pesticides in broad use and the difficult analytical chemical which must be used.

The form of this survey is being discussed within EPA at this time. Our next step is to actively seek the involvement and expertise of the Department of Agriculture and the U.S. Geological Survey and others. This would be a major effort, and whatever the form, would not be inexpensive in contrast to the other survey that I mentioned.

This study will be a major effort to identify the existence of contamination about which we can now only speculate with regard to ground water.

Mr. Chairman, we are also reviewing the comments that we received on our ANPRM on phase II contaminants. We are in the final stages of review and expect to complete this review late this spring. The second phase of regulation involves approximately 40 microbiological, inorganic, and synthetic organic contaminants, including several of the pesticides.

As a final note on our regulatory program and effort, you may be aware of the suit brought against the EPA by the State of South Carolina in regard to the regulation of fluoride, a long continuing subject since 1975.

Just let me report to you that we have reached agreement before the Federal judge in district court in South Carolina and will be coming forward with an RMCL and MCL for fluoride in the fall of this year.

Now, let me turn my attention, Mr. Chairman, if I may, to S. 124. The ac is basically a sound and workable law, but our experience has shown the need for some adjustments. Of the amendments you have proposed, many appear to us to be useful changes and additions, while there are some we could not and cannot support.

In my testimony before the subcommittee last June, I set out the administration's position on many of those which you have already pointed out.

Let me turn first to technical implementation. On the face of it, regulating drinking water contaminants appears to be slow. We admit that and quite honestly, it is, in fact, slow.

Perfecting scientific knowledge is sometimes also necessarily slow. However, once the science is adequate, there is no real reason to permit the regulatory process, in and of itself, to be slow or inefficient.

EPA has long sought to streamline the awkward procedure for promulgating drinking water standards. Three of the proposed amendments would help to accomplish this.

First, the bill eliminates the requirement that the National Academy of Sciences propose the recommended maximum contaminant levels.

Second, it allows the simultaneous proposal and promulgation of recommended maximum contaminants or the maximum contaminants goals, as they are called in the bill, and the enforceable national drinking water standards, themselves.

Third, the bill removes the distinction between interim and final standards. EPA continues to support all of these.

Although independent scientific information on drinking water regulations is useful, having the NAS set regulatory goals is not a workable mechanism. The bill recognizes this and substitutes an opportunity for EPA's own Science Advisory Board, which must report to Congress, as well as ourselves, to review the regulation.

The simultaneous proposal and promulgation of goals and regulations should speed up the process and make public comment more meaningful because the goals, the standards, and their relationship can be discussed simultaneously.

Finally, there is no reason to perpetuate the distinction between the interim standards, promulgated just after the SDWA was passed, and the revised standards now being developed.

In like measure, the added flexibility in enforcement of MCL's and new UIC regulations which would result from several of your proposals is important and has our full support.

Among those proposals, the most important is the new administrative order and penalty provision. This authority will remedy a longstanding deficiency of the SDWA, permitting us to take administrative action in large numbers of straight forward cases, rather than being forced to resort to court action in every case.

This will also be particularly useful in enhancing compliance with monitoring requirements among small systems and injection well operators. A traffic ticket approach will speed full implementation of monitoring requirements as an important first step in guaranteeing safe drinking water and full protection from unsafe injection practices.

While we are enthusiastic about the proposed new enforcement powers, we oppose their mandatory use. There were about 64,000 violations of drinking water regulations nationwide last year. Even if EPA's enforcement office had the necessary funds necessary to issue that many administrative orders, it would be a waste of resources and would unduly infringe upon State responsibility. Selective Federal enforcement in delegated States can be very productive provided we have the discretion to choose the target.

The administration also supports a statutory provision for exemption of small systems which are economically unable to comply with all the drinking water standards, provided there is no unreasonable risk to health. We continue to believe that a small system, for this purpose, should be defined as one serving fewer than 3,500 people. This is the size at which a system can support a full-time manager and generally charges for water, the two conditions that indicate the minimal technical and financial resources to undertake sophisticated treatment.

We also believe that the amendments tailoring the public notification of violations to the seriousness and frequency of the violation may significantly enhance enforcement. The public's attention should not be diverted by a stream of unimportant notices, but rather be focused on those which identify problems with their water supply systems. We support this element of the bill as well.

The technical changes, Mr. Chairman, to the law I've just discussed are important and we support them fully. There are other provisions, however, with which we cannot agree and we cannot support.

Consider the mandatory treatment provision. EPA sees merit in requirements for all public water systems to disinfect, and those drawing water from surface supplies to filter, where these techniques are necessary to protect the public health. But we believe that statutory amendments in this area are unnecessary.

We have already published an ANPRM describing the possibility of filtration and disinfection regulations, with provisions for variances. This will be part of our Phase II proposals as well.

Publication of the Phase II notice will provide an opportunity for full public comment on the specifics. Similarly, S. 124 would define GAC for the control of synthetic organic contaminants. We have already published an ARPRM discussing the use of GAC and comparable control technologies as part of our Phase I proposal. Opportunity for full public comment on the specifics of using these technologies will assure their use where necessary.

I have already discussed our considerations on monitoring for unregulated contaminants. Such an effort would be based on the existing authority within the SDWA. We do not feel that any further authorities would better serve than those presently available.

Let me turn my attention now to the base for this standard setting. While the administration supports streamlining of regulation development, Mr. Chairman, we cannot support changes to the basic process which do not enhance our ability to regulate efficiently.

S. 124 specifies regulation on contaminants listed in EPA's advance notice of proposed rulemaking. The list described in S. 124 adopts our ANPRM's and therefore are tailored to drinking water concerns.

However, as we have said in connection with similar proposed lists in other environmental statutes, as well as our own comments last year, we do not think that mandated lists, including the annual listing process required by S. 124 should be used to force regulatory development. They impose unwarranted rigidity and reduce our ability to adjust priorities within the agency in response to new and emerging problems.

Similarly, we suggest the inconclusion of language making clear the Administrator's flexibility not to regulate a contaminant when it is found in a very few systems or at very low levels.

Of even greater concern is the proposed amendment No. 4 in S. 124 which would dramatically alter the basis on which we select chemicals for regulation. The amendment would require EPA to promulgate MCL goals and associated standards if there is a rational basis to believe that the contaminant has any adverse effect on the health of persons.

This would replace the existing provision requiring the Administrator to establish RMCL's for each contaminant which, in his judgment, may have any adverse effect on health. We strongly oppose this proposal.

The amendment, as proposed, would eliminate the Administrator's flexibility to evaluate all available science. It would replace the reasoned judgment of the Administrator with an unthinking rule, forcing him to disregard valid scientific data.

It could conceivably force the Administrator to disregard the majority of existing data. It seriously limits the Administrator by forcing him to accept a single rationally based argument even when it is not supported by the bulk of the scientific evidence available.

We believe the Administrator should have the opportunity to weigh all the available data and make the most rational decision possible. The administration cannot support such an unreasonable and inherently irrational approach.

The administration does not oppose the proposed amendment No. 5 which would permit filing of requests for judicial review of the SDWA related actions in any appropriate United States court of appeals.

Mr. Chairman, I have been relatively silent on matters related to an expanded ground water program, as you pointed out in your opening statement. I understand that we will get into this subject a little bit later. Nevertheless, just let me identify some progress.

At the time of our last testimony before the subcommittee, we were developing an EPA strategy for ground water protection. That strategy is complete and was released by EPA last August. We are now moving ahead with its full implementation.

We have established the Office for Ground Water Protection, headed by Marian Mlay here in Washington and corresponding units in all of the 10 EPA regional offices.

In addition, in our effort to stress our commitment to a closer involvement with the States, we have awarded almost $7 million in State grant funds, which you helped to make available, thereby enhancing the States' ability to build strong ground water protection units.

We have taken substantial steps to address the problem of pesticides in ground water and a strategy to approach it by using the full array of agency authorities presently available. A guidance is under development to rationalize all EPA program policy on ground water protection and cleanup, taking the value and relative vulnerability of the ground water into account.

Work is underway to review and assess ground water research, monitoring, and data management. The Geological Survey is helping us in this task. I am very encouraged by the progress we are

making to focus existing EPA authorities and resources on this very critical problem. For that reason, we will not support any new legislation at this time.

Mr. Chairman, in conclusion, I would like to make a couple of points, if I may, with your permission. The first is that I have enjoyed my privilege and pleasure in working with you and members of this subcommittee and the full committee. The next time you may see me before you, I will be in somewhat different role at EPA, as you know. That has been made public.

Second, I would like to commend to you and to this subcommittee probably what I consider to be the best professional staff in this town, under Vic Kimm. With the program since 1974, he has brought into our offices people like Arnie Kuzmack, Joe Cotruvo—of course, I could name them all. I wish I had time.

Just let me point out that this is probably the best group of people that I have had the privilege of working with. They are extremely professional, dedicated to this task and under their very strenuous and sometimes very prolonged efforts, I believe that I can report to you that your Nation's drinking water is safer for the effort. And I just thank you for that opportunity. That concludes my statement.

Senator DURENBERGER. OK, Jack, thank you very much. The members and staff of this committee are grateful to you for bringing what I personally characterize as a greater sense of confidence in the analytical side of the whole water area.

I know you are going to have a lot more fun going out to region 4 and actually doing things rather than just sitting around here shaping them with politicians and other people. I agree with you about your staff. I think we are all fortunate that you have been here putting that process together.

Let me now ask you a series of questions on the regulation of the 73 chemicals which are listed in the bill. First, if you would briefly describe how you construct the list, what factors, or considerations, or surveys got the various chemicals onto the list?

Mr. RAVAN. Thank you, Mr. Chairman. Let me give you two or three factors, then I will ask Dr. Kuzmack to join me.

First of all, the identification of the substances is based upon frequency of occurrence, that is, which could quickly become a possible threat.

Second, the amount of believable data that we have in regard to where are those substances occurring.

Third, certainly involved in that, what do we know about those substances, the toxicology involved, how should we go about regulating that substance?

Beyond that, let me ask Arnie to tune in to how we get to that particular number.

Dr. KUZMACK. Basically what we have is what might be described as an intelligence network. As incidents of contamination are discovered, due to any number of means, ranging from investigations around hazardous waste sites to people analyzing their water in a high school chemistry class and discovering something unexpected, of course a great many activities on the part of the States, we become aware that particular chemicals are being detected.

In addition, of course, we are keeping an eye on the toxicological literature and if new evidence appears that a new chemical is carcinogenic or things of this sort, we are aware of that.

Basically out of that we construct a list of chemicals of concern. What we tried to do in those two advanced notices, and particularly the second one, is lay out, for the public, our future agenda.

It includes a fairly comprehensive list of those chemicals that we knew enough to be concerned about. I think we were aware at the time that there were probably some things on that list that, when we had fully got up to date, we would conclude that it was not worth regulating. We tried to be inclusive in developing that list.

Senator DURENBERGER. Do you expect to publish an MCL for each of the chemicals on that list?

Dr. KUZMACK. We would expect, after evaluating all of the information, to proceed on probably the majority. There will be, I am sure, some that we will decide not to proceed on.

Senator DURENBERGER. Would you mind giving us again, briefly, the reasons why you would not publish an MCL, not what would delay setting a standard, but what kind of information might come in that would lead you to conclude that a national standard is not necessary for health?

Dr. KUZMACK. Basically, the information would be in two types of areas. One, if as we evaluate the toxicological data, we conclude either that it is not a threat or that there is not enough information to decide.

For example, if the material simply has not been tested, even if we detected it, we cannot develop a standard. In that sort of a case we would take actions to get additional testing to be done, so we would be able to resolve that. We would not be able to proceed, in the short term, in setting a standard.

In addition, there may be some cases in which we conclude that, on balance, a chemical is not a threat. An example of that would be zinc, which at the levels that occur in drinking water, since it is an essentially nutrient, it is probably good for you.

The other kind of situation would be when we conclude either positively that there is evidence that there is not significant occurrence in public water supplies, or based on an absence of data and knowledge about the use, amount of production, disposal methods and things of this sort, that it is not likely to occur in drinking water.

We would not regulate in those cases. Or at least, we would make it a much lower priority and perhaps get to it in the future.

Senator DURENBERGER. Let me just take the area in which you find the toxicology insufficient. What do you do to speed up the science? Can you give me some specific examples with specific contaminants of steps that EPA has taken to arrive at a conclusion sooner than you would have, say, under the natural course of events?

Have you, for example, ever asked the manufacturer of a chemical to provide health data under TSCA?

Dr. KUZMACK. There are a number of different kinds of things that we have done. In some cases, we have been aware that there were ongoing studies and we simply have to wait until they are fin-

ished. There have been a number of cases in which we have encouraged the research arm of EPA to actually conduct the studies.

In other cases we have referred the toxic substances to the National Toxicology Program to undertake testing of those. Those tests take a long time to complete. That is one of the disadvantages.

In terms of our referring substances to Office of Toxic Substances, we have been working with the pesticides program for those substances which are pesticides. And they are involved in a major effort, as you may know, to improve the degree of testing, particularly of chemicals which were registered a long time ago and for which the data base is not up to what we would consider current scientific standards.

We have not, as of this point, actually used the TSCA authorities to test chemicals, but if an appropriate case occurred, we certainly would not hesitate to do that.

Senator DURENBERGER. You would not hesitate to do that?

Mr. RAVAN. That's correct, Mr. Chairman. Let me emphasize, the EPA has not, in the past, availed itself of this particular tool. We hesitate to characterize how valuable or may not be valuable, TSCA may be in this realm. We haven't tossed it overboard. We are, in fact, considering the possible use of TSCA for the future.

Senator DURENBERGER. Let me now take a specific chemical, ethylene dibromide. Let me give you a little history. It was first recognized as a potential carcinogen by a Federal agency in 1975, confirmed by a panel of government scientists in 1977, the pesticides office in EPA worked up the science and the papers called "Position Documents," PD-1, PD-2, PD-3, in 1979 and 1980.

But nothing happened until 1983. In 1983, the State of Florida discovered it in drinking water and wells and forced the Environmental Protection Agency to take action.

You were here, Jack, for a hearing in November, 1983, where we discussed EDB as a drinking water contaminant. At about the same time, your agency was forced to ban it as a fumigant in the soil and later in milk. That was somewhat more than a year ago.

So now, why don't you tell me when you expect the drinking water office will be able to have a regulation in effect setting a national standard or an MCL for EDB in drinking water?

Mr. RAVAN. Mr. Chairman, I would hesitate to give you a date that the MCL would appear. If we kicked off, let's say a year ago, evidence finding, with regard to EDB, it would, as you recall, take about 5 years to get that MCL in place. So that is the kind of timeframe that we are talking about.

The other process involved with EDB is that, if we have taken the stand that it is bad enough to ban it, that is pretext enough to regulate it in drinking water. We are not certain that EDB is going to disappear readily from a drinking water supply. If it is bad enough, we are going to have to switch the water supply as we did in that case in Florida.

Let me ask Arnie to address the question of where we are with regard to toxicology sufficient to set that standard MCL.

Dr. KUZMACK. In the case of EDB, of course, the toxicology is quite clear. I think there is relatively little argument on that. As

you pointed out, there has been concern for some time about whether EDB is appropriate for use as a pesticide.

It was only, however, around 1983 that we had evidence of occurrence in drinking water which is where our program started to focus on it. It was listed as one of the contaminants in our phase 2 advanced notice which was published in 1983 as well. It is under serious consideration for the phase 2 RMCL's which we expect to come out with within a matter of months. At that point we then get into this three step process.

So it would probably be 2 years beyond that before we actually have the standard. As we mentioned, we would like to be able to collapse that process in the future.

Senator DURENBERGER. The answer is that something like 12 years out there after the first warning that we had in this country in about 1975 or so——

Dr. KUZMACK. Or about 4 years after the first indication of concern in drinking water, from 1983 to 1987.

Senator DURENBERGER. Yes. OK. Four years after the first concern was expressed about the drinking water problem; 3 years after it was banned as a pesticide.

Dr. KUZMACK. Yes.

Senator DURENBERGER. I am curious to know whether you expect an MCL on EDB that comes out say in 1987 which has the effect of forcing every drinking water supplier to test for EDB will be of much value since the pesticide will have already been out of use for three years.

Dr. KUZMACK. There will be amounts of the material in the soil and in the ground in those areas where it has been used, that can continue to get into drinking water supplies.

There is some value in having a standard. The States where it has been used, of course, are well aware of the problem. They have been testing wells. We have provided them with guidance as to what the appropriately levels for health concern are.

So that we are, in fact, taking actions to protect the public while this necessarily very long rulemaking process is proceeding.

Senator DURENBERGER. Let me ask you about a UPI story that we got this morning reporting that a chemical, methylene chloride, used in hair sprays and paint removers, as well as to produce decaffinated coffee, appears to have caused cancer in laboratory animals when taken in high doses, that was according to a federal research report.

This is a chemical on the first list of contaminants that EPA published. It is also one that EPA has not proposed for an RMCL, and apparently was not intending to regulate. This UPI story indicates that the cancer study has been sent to the Environmental Protection Agency and maybe you can tell us whether the Agency will reconsider setting an MCL for the chemical, based on your review of that study?

Dr. KUZMACK. Yes, we will. We have been aware that this study has been ongoing and heard, sort of scientific rumors, to the effect that it was coming out positive. When we proposed the RMCL's a year ago, we did not have that study and therefore could not rely on it. We would now hope to pick that up in phase 2.

In that particular case, there was another circumstance that led to our not including it in the phase 1 proposal. That was the fact that this chemical was very commonly used in the laboratory. So, therefore, the occurrence data on it was unreliable since many samples were contaminated in the laboratory due to its use as a laboratory solvent. So we did not have any reliable occurrence data on it.

Mr. RAVAN. Mr. Chairman, let me emphasize the first part of that. We have, in fact, discussed this particular substance already at the policy level. Dr. Jack Moore has lead in the substance of what EPA may do in the future based upon now this new evidence that has been made available to us.

We believe that the classification of the substance, methylene chloride, will occur about April. After that we will decide how to deal with it in regards, not only this program, the Safe Drinking Water program, but others as well.

Senator DURENBERGER. But we are going to go through this series of time periods from April on and when do we get some assurances about our decaffinated coffee and our hair spray and everything else?

Mr. RAVAN. Well, I think I will leave the coffee up to the Food and Drug Administration. The hair spray, I think, I would probably have some advice for the ladies, as well as the men, as a matter of fact, you are correct, the article is correct, it is the propellant of choice under the high pressure cans that are sold to the public.

What probably will happen, if this story turns out to be as true, as we tend to think it might be at this point in time, is that there will have to be some sort of substance control, as in the cases of EDB.

Thereafter, if this substance is presenting a threat, as we pointed out, to drinking water supplies, then we will have to take action. And yes, the process will be very slow and laborious.

Dr. KUZMACK. I would add to that that the Food and Drug Administration also has regulatory authority over hair sprays.

Senator DURENBERGER. Going back then more specifically to a chemical like EDB, what is it that you can tell the committee that will convince us that discretion for the industry is appropriate when it comes to setting national drinking water standards, if you had discretion, since 1974, and you haven't regulated, not even a chemical like EDB, on a timely basis?

The Drinking Water Act is not an environmental statute. It is a public health law. It doesn't say that you have to wait until all the EPA offices agree with you about the science that is involved in the process until they are ready to act to ban the chemical.

I came to this hearing, Jack, wanting to be convinced in some way that the health standard was OK, that we didn't need to put in new language to enforce some action beyond setting deadlines for the list.

What strikes me is that the lists just don't keep up with the chemical revolution in this country. I am beginning to think that some kind of action or some new enforcing language is going to be necessary. Maybe you can convince me I am wrong?

Mr. RAVAN. Let me try again, Mr. Chairman, to articulate the two things that do give us concern. First, there is, in fact, a procedure of the Safe Drinking Water Act as it is presently entitled. I don't think there is any disagreement that the present procedure is too long (that is, that two-step procedure which quickly goes to four steps and then adds 18 months for effective dates with regard to the substances in and of drinking water supplies).

Certainly the agency has not won any track records since 1974, even though the rule making procedure takes 5 years. We want at least two sets of standards. We are just on the front edge of one set, thinking in terms of the four phases that are now before us.

I guess the offset to that, for me, that I would like for the Committee to have some faith in, is that we are, in fact, in that process and we are, in fact, making progress and the substances are beginning to be dealt with.

The other side is, I am not certain that increased rigidity by statute, upon the Administrator, solves the problem, given what you and I both know to be the circumstances, which is in fact, we are living now in the chemical age. What we have done since World War II in and on the ground and our waters is being newly discovered every day.

We used to believe, that these substances would be prevented from encountering the ground water and our surface waters, but that is not the case. Now, we are having to do not only what the law says, but we are having to increase our vigilance, that is, monitoring for unregulated contaminants, trying to define what the universe of substances is and will be in the future.

I doubt, Mr. Chairman, there will ever come an annual sequence of hearings, in fact, where you and I will not have both discovered some new threat, that we didn't know about yesterday, that now we have to do something about, under a very cumbersome process.

The thing that I would ask you for is recognition of that process, rather than taking away whatever flexibility that the Administrator might have to deal with the science and the toxicology available to us on the substances as they do occur in drinking water.

Senator DURENBERGER. Jack, I find myself in agreement with you, but I am increasingly troubled by the fact that last week a very, very close friend's 26-year-old son was diagnosed as having a massive cancer. All that did was remind me was that my first wife went the same way. I am frankly scared to death about the chemicals that are out there and that we are consuming in one way or another.

I do believe there is a revolution going on. I don't think we have 12 years, 8 years, 7 years, 4 years and all that sort of thing, to get us through some kind of an intricate process of discovery.

I am also bothered by the fact that with this large deficit that we have constructed for ourselves around here, that there are people in this Government that believe that we shouldn't do any of this sort of thing, we shouldn't put money into all this analysis because we do not have it.

As I look at the deficit, I see it as a forcing mechanism for people who don't want to deal with these problems to say, "We don't have the money to deal with them. Let the States deal with them, let somebody else deal with them. We don't have the resources."

So I suppose, in a sense, on behalf of a lot of people I don't even know, I am begging for something more than, "Let us keep the discretion to continue to do things as usual but in a slightly higher pace than the past," to come from the Environmental Protection Agency. Because you are as close a resource as we have to some of the realities that those of us who are lay people really don't fully understand.

Dr. KUZMACK. We certainly share those concerns. I would add a few things. I think that to the extent that we have mandatory lists, we are less able to deal with new problems as they come along because we are forced by the law to be working on the old ones. There are some other things that we can do.

For example, we have been quite successful in issuing health advisories which are guidance to the States on a nonlegally enforceable basis to deal with the media problems on a much quicker basis. I think the State people who have testified before this Committee last year and on past occasions have testified that this is a very useful thing that we have done.

I would point out a few other things. One, that we are taking two very major steps. One, the proposal for enforceable MCLs for organics, which are the ones most frequently found in ground water. And then the Phase II effort which will be a major step. We are doubling the numbers of contaminants to be considered for regulation.

And finally, in the pesticide survey which Jack referred to, we are trying to get out ahead of the problem, not just react to things as they come in but go looking for what things may be a problem. I think we certainly are not pleased with the pace with which things have been going up to this point but we believe that we are really getting moving.

Senator DURENBERGER. OK. Max.

OPENING STATEMENT OF HON. MAX BAUCUS, U.S. SENATOR FROM THE STATE OF MONTANA

Senator BAUCUS. Thank you, Mr. Chairman. Mr. Chairman, first I have a statement before the questions I have to ask.

Mr. Chairman, I join with you in welcoming our witnesses. I look forward to your help in our effort to evaluate the Safe Drinking Water Act. Nothing is more basic to our lives than safe water. The Safe Drinking Water Act was designed to guarantee that Americans are not threatened by hazardous water supplies.

S. 124, which you introduced and I cosponsored, makes a number of important changes in the law. These changes are in response to what we agree are flaws in the current law. These changes may not go far enough toward correcting the problems in the current safe drinking water program.

I would like the committee to address several concerns. I am concerned, first, about the growing trend toward using the standards in the Safe Drinking Water Act as the standards for Superfund, RCRA, and other environmental laws. This seems to me to be mixing apples and oranges.

The Safe Drinking Water Act standards were meant to make sure our drinking water is safe. They were not set up to measure whether a toxic waste site is clean.

If we are going to apply universal standards for water, then I believe it should be a health standard. The standard in S. 124—best available technology—is a significant step forward.

There are still questions about how we define a "maximum contaminant level." We say that this standard is based on the best end product of a water treatment system. We say that the economics of reaching that standard should be considered.

This gives local communities a lot of flexibility in meeting Safe Drinking Water Act standards. But, in the case of Superfund or RCRA, this could actually permit unnecessary degradation of clean water.

The issue of setting standards should be reviewed constantly. I am not confident that either the existing structure or the proposed "rational basis" standard is the right answer.

The question is: How do we protect human health? Better technology will emerge. The sophistication of the technology to detect contaminants will improve. As these developments occur, let's not forget our goal: Protecting human health.

I am concerned about another aspect of the standards setting process; EPA's role. As has been discussed, EPA has a dismal record on establishing standards. S. 124 requires local water suppliers to monitor their water to detect contaminants that are currently unregulated. But how will EPA respond when these new substances are found? Perhaps we need a specified review of contaminants found in water supplies.

Certainly a more complimentary process needs to be established within EPA for making judgments about what to regulate and when. If inconsistencies in existing laws are leading to lethargy, then Congress needs to know this.

A requirement to list contaminants with an independent review of those contaminants might be useful. EPA should be held accountable for actions on listed substances.

The agency seems to be caught internally in a vicious circle about what to do about generating standards for contaminants once they are found. The agency must be accountable to Congress and to the public for deciding when or when not to regulate.

Mr. Chairman, you have made a public commitment to address a ground water protection program. I have made a similar commitment, and I intend to follow through. We need to be very careful that we don't do anything in S. 124 to further complicate future efforts to deal with ground water protection. We don't want to establish any precedents here that may effect the protective emphasis in the area of ground water.

At the same time we need to continue to recognize the unique problems facing rural water supplies. Two areas that are of particular concern to rural States, such a Montana, are insuring that the public is uniformly protected and that small communities are able to comply with Federal drinking water standards.

S. 124 will provide important assistance to small communities in meeting the monitoring requirements. I continue to have an inter-

est in suggestions to assist small systems obtain financing that may be needed for water system improvements.

Mr. Chairman, I commend you for scheduling this hearing. I look forward to actively participating in this process to make sure that the Safe Drinking Water Act meets ours and the country's expectations.

Mr. Ravan, I have been looking at some of the statements of other witnesses, who will be following you. If you don't mind I would like to refer to one from the NRDC and I only use the NRDC for two reasons.

I haven't had a chance to look at the others and second, I think it is important to err on the side of protecting the environment.

Certainly, NRDC comes from that point of view more than some other organizations. I will like you to respond, if you would, to some points that they make. When the panels come up, they can respond to your responses.

One question that comes up in this testimony that is provided, that Senator Durenberger raised, is the question of delay. You know all of us are frustrated about delay.

Why doesn't it make sense for this committee to take the existing time periods in the law and then reduce it say by 25 percent, just across the board?

You know it is fashionable around here. We are talking about budget freezes, partly because we are frustrated at the inability of Congress and the White House to cut the deficit down, so we come up with something simple, a freeze, out of just pure frustration. So we get the job done.

Why, therefore, shouldn't we just take the existing statutory standards and just across the board, reduce the time limit, say, 25 percent?

Mr. RAVAN. Senator, first I want to thank you for that statement. Second, I think you are one up on me. I haven't seen the statement.

Senator BAUCUS. I hadn't either until I walked in here.

Mr. RAVAN. Let me comment.

Senator BAUCUS. There are other parts to the statement too, that I haven't gotten to yet.

Mr. RAVAN. I am not sure I wouldn't oppose a 25 percent—using the word "freeze", if that means if it takes you 100 days, knock that down 25 days and take 75 days to do the same job. There is nothing wrong with that. In fact, I will be for it.

You would, probably, just with that particular proposal, have some immediate, almost immediate legal interpretation as to "whose time do I take away", in essence. "Do I take away public process time? Do I take away the RMCL? Do I take the 18 months off of the effective date?"

If you would give me some guidance or say in the statute, "I wanted 25-percent reduction in time," and that either I am to determine that 25 percent or this is how you should. I mean something like that could be done.

Senator BAUCUS. All right. I am not sufficiently familiar with the statute to know what areas should be cut. But, obviously, by the thrust of my question that I am getting at, first we have: How long is it taking? I think, obviously, is for us to go through the statute

and find out those areas more precisely that should be cut back and those areas that should not be cut back.

The NRDC statement makes specific suggestions. I am not going to take time now to go through it but I ask you to do that.

Mr. RAVAN. Yes, sir, I will.

Senator BAUCUS. I know you will, to try to find what makes sense.

Dr. KUZMACK. I would add that we strongly support the provision to have simultaneous proposal of the RMCLs and the MCLs and then simultaneous promulgation, which will cut about a year off of the process once that is implemented.

I point out we would be quite willing to look at whether the deadlines in the bill, as introduced, could be shortened. The danger is that if it is shortened so much that we cannot do an adequate job and the regulation is overturned in court, that doesn't help very much.

Senator BAUCUS. I understand the danger. But my experience in bureaucracy is the old Peter Principle, sometimes it is exponential in size too. We have got to cut down and make some decisions.

Sometimes, as you know, your first impressions are generally accurate. I know it sounds a little unscientific but looking at the data that you have, you can reach a gut level decision using the right side of your brain, not the left side of your brain, is pretty accurate. We have got to decide more quickly to get to the heart of the matter.

Mr. RAVAN. Senator Baucus, let me just emphasize, we do not disagree with that. However, it is that we can work together to squeeze this time line down, we would certainly agree that there has been less than sufficient results today under this statute.

Senator BAUCUS. I am a little concerned about your earlier response to Senator Durenberger saying that a lot of new chemicals come up and then we have learned something else. I mean that seems to imply that we don't do anything, just because we might learn something more in the future.

Mr. RAVAN. No, sir. I hope I did not leave that impression. The volume of chemical substances is a very large number as we encounter these substances in drinking water which is, in fact, the impact of the statute. Therein lies my dilemma.

We believed for sometime that we had some barrier, some physical barrier to the entry of these substances into drinking water supplies. That is no longer the case. We must hurry with what we already know. We must be prepared in the future. That is what we are trying to do. We are trying to get out ahead of where these substances are, how frequently they are occurring and so forth, with the surveys that I mentioned.

Senator BAUCUS. Let me turn to another general question on the minds of a lot of people, that is the concern that these standards are driven too much by cost factors and economics and not enough by health considerations in the country.

On page 4 of the testimony that I referred to and the following page, substantially, the NRDC is recommending deleting the recommendation of cost in establishing MCLs. Basically it is saying that the statutory definition of "feasible" is too much oriented towards the consideration of costs, it is at odds with Webster's defini-

tion of "feasible". It is at odds with what public policy should be, that is public policy should move toward setting standards that protect the health rather than spending so much timing considering cost. What is your reaction to that?

Mr. RAVAN. Senator, we have, first of all, with the statute——

Senator BAUCUS. I am asking a public policy question, not what the statute says. Shouldn't public policy move more toward protecting health and much less considered with costs?

Dr. KUZMACK. I believe, in fact, that affordable drinking water technology does meet public health goals.

Senator BAUCUS. I am sorry.

Dr. KUZMACK. I don't believe that the cost has been or will be a constraint in meeting public health policy. We have technology which enables us to treat the chemicals that we are finding to levels that protect public health.

Mr. RAVAN. Let me say——

Senator BAUCUS. You are saying that cost is not a consideration?

Mr. RAVAN. Yes, it is.

Dr. KUZMACK. It is a consideration but it has not been a significantly limiting factor.

Senator BAUCUS. Now let me ask the question: If it is a consideration, how much of a consideration is it? One percent, 10 percent, 50 percent? The question is what degree does the cost drive the result?

Mr. RAVAN. Senator Baucus, we can provide, for the record, the various specifics involved with the cost considerations—where we are coming from, how we have used it and specifically, how we have applied it.

Senator BAUCUS. Just off the top of your head, just as a matter of public policy?

Mr. RAVAN. It would be very low, in fact. If, in fact, you run down the list of RMCL versus MCL, the MCL becoming the enforceable one, with some cost in mind, those numbers are so close and they both protect the public health or else they wouldn't be there.

Senator BAUCUS. Just give me a rough, gut guess, what percent of it.

Mr. RAVAN. I will provide that to you. I don't have that. (See p. 58).

Senator BAUCUS. You are the Administrator. You know what is going on here.

Mr. RAVAN. I do. I quickly have to turn to treatment and treatment technology because when we install treatment technology to achieve the MCL involved, then one's mental processes do not turn to, "Well, it is about 10 percent of the time cost drives the thing."

I don't know how to answer that question. I can tell you that the treatment that we specify in these cases can be costed out. We do that. The treatment involved, first, must achieve the objective, which, in fact, is the protection of public health.

Senator BAUCUS. Can we take cost out as a consideration?

Mr. RAVAN. No, sir; I do not believe so.

Senator BAUCUS. Why not?

Mr. RAVAN. Because in our lives, in the way we operate in this country and so forth, cost is a factor. It is the philosophical ques-

tion somewhat like the one Senator Durenberger pointed to, that cancer costs our Nation and we can look at that as cost until it is my cancer. We say we will protect to a level of one in a million.

Well, that sounds good until I am the one. Then the cost of cancer rises dramatically because of the philosophical, the emotional, the pain, and so forth. Then one must question himself or herself, saying, "Is one enough?"

Why don't we just eradicate? Well, we do that by saying that, if we lived in a perfect world, the RMCL would be zero, there would be no contaminants in drinking water. Then when we come back to say, "OK, what can we achieve?"

We look at the treatment. We look at those costs. We must protect public health. In the case of the cancer causing agents, we in fact, do that. So I would not recommend to you that you eliminate cost considerations altogether.

Senator BAUCUS. What is the risk rate for cancer? It is one in a million, isn't it? Aren't there provisions in the law that regulate down to one out of a million?

Mr. RAVAN. No, sir.

Senator BAUCUS. Anywhere in any law?

Mr. RAVAN. No, sir. No, sir; I do not believe so.

Senator BAUCUS. Do you have a risk rate goal?

Mr. RAVAN. There is not a stated policy in the Agency or that I know of that says that in America we attempt to protect the American public to one in a million. There is no such thing.

Senator BAUCUS. Did you and your programs have a risk rate goal of any kind?

Mr. RAVAN. Not as a goal, not as a policy. We attempt to look at those questions and it will vary with regard to the threat involved.

Senator BAUCUS. Do you know if the application of any MCL's or RMCL's as a result of risk rate which is more risky than one in a million?

Mr. RAVAN. Your question is why have we set an MCL which would protect the public less than one in a million?

Senator BAUCUS. Right.

Dr. KUZMACK. Yes. For example the standard that we have for triethanomethanes is about 100 times that.

Senator BAUCUS. One hundred times more risky?

Dr. KUZMACK. That's right. However, we did that because we want to make sure, since that is a standard involved in the disinfection process, that we did not inadvertently reduce the efficiency of the protection against communicable disease that results from disinfection.

So in that case, it was a health benefit to disinfection that offset the degree of stringency that we could apply.

Senator BAUCUS. What again is that substance?

Dr. KUZMACK. Triethanomethanes which are a product of disinfection with chlorine.

Senator BAUCUS. All right. That is down to 1 out of 10,000 then?

Dr. KUZMACK. That's correct.

Senator BAUCUS. It sounds a little risky to me.

Dr. KUZMACK. If we were dealing with a pollutant, that was the result of pollution, we would want to be a lot more stringent than that. In this case we felt——

Senator BAUCUS. What are THM's? What do they do to you?

Dr. KUZMACK. It is chloroform and a number of related chemicals which cause cancer in animals.

Senator BAUCUS. If they cause cancer, why are we down to 1 out of 10,000?

Dr. KUZMACK. Because we would not want to take even a slight risk of leading to a breakdown of disinfection and the possible outbreak of a disease such as cholera that we have wiped out through this process. That can also be a very serious health risk.

Senator BAUCUS. There is no statute?

Dr. KUZMACK. There are substitutes.

Senator BAUCUS. It is less carcinogenetic?

Dr. KUZMACK. We do not have a lot of information about the health risks of those but any substance that kills bacteria is going to be biologically active and present some sort of health risk.

Senator BAUCUS. Are there examples where the risk rate is worse than one out of a million, that you are aware of?

Mr. RAVAN. I would be happy to provide that for the record, Senator Baucus, I can't recall one right offhand. We are dealing with the first nine of these substances, five of which deal with cancer, the other four do not.

Dr. KUZMACK. If I could add something. I think it would be a mistake to try to specify a risk level in a statute since we would then have to get into a protracted argument as to what the right method of calculation is. All progress would have to stop for years while that went on.

Senator BAUCUS. I still have two major concerns. One is how long it takes to do all this, and two, I sense that we are a little too concerned with the cost. I encourage you both to address that. Thank you.

Mr. RAVAN. Thank you, sir.

Senator DURENBERGER. I think both of us would have questions that we would like to propound to you. I was just informed that we had promised you that you would be out of here by 11 so you could get to appropriations.

I know Max has more questions and so do I. If we are not going to have another hearing, we are going to need the answers fairly promptly.

Mr. RAVAN. Thank you, Mr. Chairman. We would be happy to respond in writing to any questions.

Senator DURENBERGER. All right. Thank you very much, Mr. Ravan.

Mr. RAVAN. Thank you, sir.

Senator DURENBERGER. Thank you both.

Next we have a panel: Mr. Sam Dixon, assistant director of public works, Houston, TX, speaking on behalf of the American Metropolitan Water Agencies; Dr. Robert Tucker, who is deputy director of the Office of Science and Research in the New Jersey Department of Environmental Protection, Trenton, NJ; Mr. C. Robert Morris, director of the National Association of Water Companies; Mr. Gene Rosov, the president of Water Test Corporation of New London, NH.

Each of you, I know, has a printed statement, which, without objection, will be made part of the record of this hearing. We would

hope that you could summarize that statement in 5 minutes maximum. If we run out of time to ask questions, we will ask each of you to respond in writing to a series of questions that we may have of you.

So let's begin with Mr. Dixon.

STATEMENT OF SAM DIXON, ASSISTANT DIRECTOR, DEPARTMENT OF PUBLIC WORKS, HOUSTON TX, REPRESENTING THE ASSOCIATION OF METROPOLITAN WATER AGENCIES

Mr. DIXON. Mr. Chairman and members of the subcommittee, I am Sam B. Dixon, president of the Association of Metropolitan Water Agencies. I also serve as assistant director of the Department of Public Works for the city of Houston. I very much appreciate the opportunity to appear before you today.

The Association of Metropolitan Water Agencies was formed in June 1981, to serve as a voice for publicly owned water supply agencies in the Nation's larger metropolitan areas.

Mr. Chairman, we support the goals of the Safe Drinking Water Act. Our comments today will be directed toward specific provisions of S. 124 and proposed amendments.

The National Drinking Water Standards: AMWA strongly supports speeding up the process of setting national drinking water standards. We share your concern about the slow progress being made in setting standards under the Safe Drinking Water Act and commend this subcommittee for developing a procedure to expedite this process.

We are also making an effort to develop a process that meets the needs of the utilities and at the same time insures the safe drinking water supply of the public. It is only through scientific research that progress will be made in establishing drinking water standards which accurately reflects the health effects of contaminants.

AMWA commends the subcommittee for eliminating some of the confusion surrounding the development of standards and goals. While we would prefer a single standard, we believe that this provision would go a long way toward distinguishing between standards and goals by ensuring the public that water supplies—that public water supplies are not meeting goals or safe.

In the standard setting process, we believe S. 124, as currently drafted, goes a long way to ensure the standards are set in an expeditious manner.

We are very concerned, however, about language included in the amendment to S. 124 regarding the EPA Administrator to establish goals in primary drinking water standards for contaminant until he can state that there is not sufficient evidence to constitute a rational basis to believe that the contaminant may have any adverse effect on the health of persons.

One reading of this language suggests that EPA Administrator may be required to set standards for virtually every contaminant, even in places where there is significant scientific evidence to demonstrate no adverse health effects.

Our association, without success, has attempted to gain a clearer understanding of the meaning of the "rational basis test", as used in the amendment. It is our belief that by including this language,

which is as yet undefined, we will be allowing lawyers, and not scientists, to determine whether a contaminant poses a threat to the public's health.

AMWA, as in the past, continues to support the development of a procedure that will speed up the standard setting process. We believe that rational basis language will only serve to slow down the process through lengthy administrative and legal proceedings.

AMWA would like to recommend, however, that the major listing of the contaminants listed by the EPA Administrator be based on the results of monitoring as required in Section 7 of Senate Bill 124. This approach would avoid the listing of contaminants not found in drinking water supplies and give priority to those contaminants that are found in the drinking water system that may pose a threat to public health.

AMWA also recommends that, as we have in the past, that for purposes of regulation, a three-tiered approach be used similar to that used by EPA.

The cost and technology considerations: AMWA supports the promulgation of MCLs based on generally available technology with cost as a consideration as provided under the existing law. We also recommend that the Subcommittee provide a definition where generally available, which can be used to identify treatment processes for establishing national primary drinking water standards.

Senate Bill 124 would amend this provision by requiring that the development of standards be based on best available technology taking cost into consideration. Although we recognize the necessity of moving ahead with standards based on technology, we are concerned that the use of the best available terminology will result in the costly installation of exotic treatment devices which may or may not enable us to meet the standards set by EPA and may or may not have any relationship with the health effect of the given contaminant.

Mr. Chairman, we feel there must be a more reasonable approach to the standard setting dilemma that we face. We believe that more emphasis should be given to the development of sound scientific health effect data if not through the National Academy of Sciences, then through some other research organization.

So if the Subcommittee is truly convinced that using the word "best" instead of "generally" will allow for the development of standards with greater credibility, of reliability, we strongly urge the Subcommittee to provide us with a definition of "best available technology," to be used in the development of primary drinking water standards.

Such a definition should ensure that the best technology is available and has been shown to be cost effective and has been tried, tested and implemented at a scale comparable to most major public water supply systems. Another related issue being considered——

Senator DURENBERGER. Don't get too far into the issue, because your five minutes is up. You can wind up your talk if you want to. Do you have a bottom line, a last paragraph that socks it to us?

Mr. DIXON. This completes my testimony, Mr. Chairman.

Senator DURENBERGER. Very good.

STATEMENT OF DR. ROBERT TUCKER, DEPUTY DIRECTOR, OFFICE OF SCIENCE AND RESEARCH, NEW JERSEY DEPARTMENT OF ENVIRONMENTAL PROTECTION

Dr. TUCKER. Thank you Mr. Chairman and Senator Baucus. I appreciate the opportunity to come down from New Jersey and present views from the State perspective. I will summarize the points that I made in the written testimony.

I was reflecting on the way down that it is appropriate that we are meeting on Johann Sebastian Bach's 300th birthday. If we can achieve the standards of purity and high quality that he had in his music, for drinking water, I think we will have gone a long way.

Senator DURENBERGER. I will try to remember that next year.

Dr. TUCKER. New Jersey has had experiences of serious problems with drinking water. We are certainly not unique because other States have had similar problems. We often like to say that one of the reasons that we are noted for environmental problems is because we have such a vigorous program of going out and looking for and dealing with the problems.

It is true that we have faced serious problems of drinking water contamination. The New Jersey Department of Environmental Protection and our Office of Science and Research has done a vigorous job of looking for contaminants in ground water, drinking water and other media. This has pointed out to us the need for strong drinking water regulations.

I think it was out of the certain frustration in the State and a demand by the public that the New Jersey legislature went ahead and passed its own amendments to the New Jersey Safe Drinking Water Act. This called for the setting of maximum contaminant levels and gave guidelines to the Department of Environmental Protection to move ahead with protective regulations.

There was a sense of being frustrated and being tired of waiting for the Federal agencies do the job. We are moving forward with implementing the Lesniac Amendments, which we call A-280 or Assembly bill 280. You asked, "Should the States have to deal with this problem?" Yes, the States will go ahead.

But there is something unfortunate about not having more regulatory guidance from the Federal level. I think it is hard for the States to easily come up with the necessary scientific and toxicological advice to go ahead on their own.

At this point I should acknowledge that we have gotten from the staff people at EPA a lot of technical help. We are also working with other States, through the Toxics Integration Programs sponsored by the National Governor's Association to make sure that there is some commonality between the States. But to try to deal on a State by State basis, I think, is cumbersome.

So I would certainly support the amendments to the Federal Safe Drinking Water Act to move forward with the process of setting standards. Clearly the public is demanding it. In my prepared testimony I describe in more detail our own process.

But perhaps, Mr. Chairman, you will be pleased to know that Dr. Judy Weiss, who spent her sabbatical from Rutgers here last year and worked on some of the issues, particularly the Safe Drinking Water Act, has been appointed a member of the New Jersey Water

Quality Institute which is a body set up under A-280 to make recommendations, to review the act, and to look at the scientific issues that we are facing in New Jersey.

We are proceeding with setting standards. One of the aspects of our law is the setting of a one in a million risk for carcinogens. We are curious as to how the science of this is going to come out.

I noticed in the Federal amendments—to go on—one thing that I was a little disturbed about under the aquifer protection program, the injection program. Although we don't permit injection in New Jersey, a provision for injection wells within one quarter of a mile of drinking water wells, which might occur in other states, seems to me to be a potential disaster. A quarter mile is not really very far when you are speaking of ground water movement.

Also I am bothered by the definition of "hazardous" in the amendments. We have had problems with a definition of "hazardous" in New Jersey when it comes to protecting ground water, in that it may not be comprehensive enough.

An example that comes to mind is that we were told it is perfectly OK to use foundry sand as cover for landfills, that such material was not "hazardous" under the definition. It turns out that this particular foundry sand had an organic binder that was laced with polynuclear aromatic hydrocarbons, highly carcinogenetic kind of stuff that if it gets into the water can bioaccumulate in living organisms. It is a real problem. So I would urge, as I have in the written testimony, a review of that definition.

Finally, in protecting aquifers, I would plead for not overlooking problems of cross-media contamination. We have had people say in New Jersey, "OK, let's site everything down near our estuaries and by the shore, then we can protect our ground water."

Well, from the public health standpoint, if we manage to get some of these organic compounds into the food chain and into our fish, we are certainly not better off. So we have to look at it from a cross-media approach. I certainly do support the amendments in carrying forward the standard-setting process. I also think it is very important to have the public very much involved in this, to be informed and to participate in the process.

Senator DURENBERGER. Very good.

Dr. TUCKER. Thank you.

Senator DURENBERGER. Thank you for your statement.

STATEMENT OF C. ROBERT MORRIS, EXECUTIVE DIRECTOR, NATIONAL ASSOCIATION OF WATER COMPANIES

Mr. MORRIS. Good morning, Mr. Chairman and Senator Baucus. I am C. Robert Morris, executive director of the National Association of Water Companies.

NAWC supported enactment of the Safe Drinking Water Act in 1974, hoping EPA would deploy scientific and regulatory capabilities beyond the reach of the industry and States in the development of sound, health-based standards to guide us in doing our job and to protect the public.

Now, 11 years later, we are disappointed. The Drinking Water Program consists of an annual EPA recitation before this commit-

tee of problems and promises but precious little action. It is like a time release placebo.

The fault lies within the act itself, so let's fix it.

Toward that end, S. 124 contains several provisions that should make the Safe Drinking Water Act work better. In some of these areas we would suggest minor changes to correct glitches as set forth in our longer statement which we request be included in the record.

Unfortunately, S. 124 and amendment 4 also contain some rotten apples that will spoil the barrel. Let me address the worst of these.

My prepared remarks give ample reason for rejecting the rational basis language. This has been adequately debated during EPA's presentation here this morning and we agree with their conclusions on this issue. The rational basis concept would, in our opinion, only hinder the operation of the Act rather than improve it.

Moving on to best available technology or BAT, S. 124 would change the act's definition of "feasible." It would replace the requirement that treatment technology be the best . . . generally available with best available.

The BAT concept seems to have been borrowed from the Clean Water Act. However, BAT is made workable in the context of that law through the use of classes and categories of dischargers. We believe the Safe Drinking Water Act should require the same quality of water from all suppliers. We therefore urge Congress to reject any approach that will force suppliers to seek variances en mass.

This points up a question which Congress has not asked and EPA has not answered. Since most treatment technologies, whether generally available or best available, achieve a percentage removal, it is crucial to know what the assumed raw water quality will be for purposes of applying a percentage to the absolute number to arrive at an MCL applicable to everybody. For example, if BAT for some contaminant has a 95 percent removal efficiency, one must ask, when projecting an MCL, 95 percent of what? We submit that, if this committee seeks to make a contribution to EPA's administration of the act, and implementation of the definition of what technology is feasible, it should seek to shed light on this fundamental issue.

Since BAT is not better defined than "generally available," the terminology change proposed in S. 124 will simply lead EPA from one blind spot to another.

Another amendment S. 124 would make to the definition of "feasible" is a confusing directive regarding granular activated carbon or GAC. Over the last year or so we have seen this directive in many forms and we believe that each of them has been technically cumbersome because the underlying concept is flawed. Bear in mind that GAC is a relatively new and highly technical and complex technology.

Even though we recognize that GAC may be an effective, if not the most effective, technology for some synthetic organic chemicals today, we continue to feel that EPA, not Congress, is the appropriate instrument of government to weigh these difficult questions of technology and cost, especially when the innovation might some day, for at least some contaminants, make GAC less desirable if not obsolete.

We could support a requirement that EPA consider GAC, aeration or any other technology as long as the Agency is not burdened with a legislative requirement or justification for pronouncing any of them necessarily the "best."

S. 124 proposes new authority for EPA to issue administrative orders. While the best approach here would be to strike this unwarranted new authority, at a minimum we urge that administrative orders be available to EPA only in non-primacy States and the word "shall" be changed to "may" to preserve the Agency's flexibility.

In the matter of judicial review, we believe that S. 124 would be improved by addition of the same provision for venue of judicial review which this Committee's bill contained last year. We believe that the Federal appellate courts in Boston, St. Louis, New York and New Orleans, for example, are at least as competent as the one in Washington, D.C. Beyond that, in terms of fairness as well as convenience, we believe that citizens in Montpelier, Minneapolis, Missoula, or Dallas who need to avail themselves of a court's assistance should not be obliged to trek all the way to the Nation's Capital to do so.

As proposed last year by Senator Moynihan for filtration of surface supplies, similarly the bill should establish criteria for allowing relief from the disinfection requirement independently from the variance provisions of section 1415 of the Act.

Senator DURENBERGER. Your 6 minutes are up.

Mr. MORRIS. In other words, those provisions regarding disinfection should be changed to read and be applied in a manner substantially the same as the bill's provisions respecting filtrations.

Mr. Chairman, that concludes my statement. I would be glad to answer any questions. I will look forward to working with you and your staff toward the enactment of a good bill, very soon.

Senator DURENBERGER. Thank you very much.

Mr. Rosov.

STATEMENT OF GENE ROSOV, PRESIDENT, WATER TEST CORP.

Mr. Rosov. Mr. Chairman, members of the Committee, I appreciate being permitted to speak to you today. I would like to underscore our company's admiration for what the State of New Jersey has done. We are a New Jersey certified facility.

In particular, I would just like to comment on Dr. Tucker's comment about cross-media contamination. We believe, and I think the scientific records show, virtually, all pollution is water pollution. I think that is a thought that we ought to keep in mind as we go through these proceedings.

Let me quickly outline the horse that I am riding today. It really is the horse of lead contamination. It has brought us to a very interesting conclusion as regards this particular Act.

Quickly, what I will do is give you some rapid background, the details of which are contained in materials that I have presented for consideration by the staff. It gives sources and so forth.

A study done by the EPA and the Medical Center, Department of Pediatrics and Harvard Graduate School of Education about 10

years ago demonstrates a direct correlation between drinking water lead levels and blood lead levels in the Boston area.

Drinking water lead levels were shown to be the best environmental predictor of blood lead levels, significantly exceeding paint, air, dust, pica. Children in the 3 to 6 year age group are the highest risk.

A 1979 study published in the New England Journal of Medicine summarizes: "Exposure at doses below those producing symptoms severe enough to be diagnosed clinically appears to be associated with neurological deficits that may interfere with classroom performance."

A June 1984, study published in the American Medical Association discovered, "Lead was found to be associated at a dose related fashion with an increased risk for birth defects."

The Journal of the American Medical Association reported only this year, fairly recently, based on data collected from the Nhanes survey that there is a direct linear relationship between the blood lead levels and hypertension, resulting from the exposure to lead by the general population. They reported that levels of lead in blood, considered to be nontoxic (less than 30 micrograms per deciliter) can still trigger increases in blood pressure.

I would also point out that the CDC recently lowered the definition of what constitutes a toxic level of lead in blood.

This then is the medical evidence: drinking water can be an important contributor to blood lead levels. Some clinically observed blood lead levels result in birth defects, poor classroom performance, and hypertension.

Lead, by the way, accumulates in bone and tissue. It is a cumulative poison.

How much lead is in our drinking water? EPA region 1 survey found that 73 percent of all the community water systems in this country have lead in some fashion in their drinking water delivery systems. EPA's publication, "Drinking Water and Health," volume 1 states, "Available data generally indicate that the addition of lead to drinking water occurs chiefly in the distribution system including household plumbing." I underline that for reasons that will become clear later.

Our sampling of about 1,500 samples of public water supplies found 15 percent of them with levels over 10 parts per billion, 6 percent with levels over the new proposed 25 PPB standard. We think that is some cause for real concern.

It is worth noting, by the way, that the New England Medical Center's study reasoned, "with drinking water lead at this level (25 ppb), more than 65 percent of all young children would have unacceptably high blood lead levels because of water contamination and other sources."

I would also point out that in a corresponding article principal EPA investigator, Peter Lassovszky wrote: "In instances where the plumbing installed is with lead soldered joints, it is possible that members of the household are exposed to high lead levels without their knowledge. As corrosive waters are distributed, high lead levels may continue to persist in the drinking water for several years or indefinitely."

At whose door do we lay this problem? It seems that what we have done in this act is to lay it squarely at the door of the community water supplier.

In fact in the definition of the MCL, that is exactly what we do. Regardless of the quality of the water at the consumer's tap, regardless of the impact of plumbing in any building on water quality, we lay the problem at the door of the supplier.

We believe that this is illogical. We don't believe it is in the public interest. Corrosion control of distribution mains, for example, could have negative impact on household plumbing. If you correct for household plumbing, you can have a negative impact on distribution.

An important contributing element in corrosion is the use of different kinds of metals in what is called the galvanic series: copper, lead, zinc, and steel all within one system. Should a community water supplier be responsible for the choice of plumbing materials in a private building?

This brings us to the following proposal. One: make community water systems responsible for the quality of water delivered to the building, not to the "free flowing tap" of the consumer. We believe this is a reasonable task. It can be achieved readily.

No. 2, and this is where we get to the nub of our proposal: make the individual water consumer responsible for any impact by his plumbing on the water quality delivered beyond the point where it enters the building. By laying this responsibility at the taxpayer's door, several important changes will occur that we believe speak to a very serious problem that the bill does not address.

The consumer will begin to take responsibility for water quality and will understand that he must share in shouldering the cost of water quality. Most people feel, if you ask them on the street, that water is free and ought to be. They also feel that, "Isn't the Federal Government protecting me?"

And we feel, that on a local basis, this attitude has got to change. And it is in changing this attitude, by changing the definition of an MCL, what the responsibilities of the community water supplier are, that we can make a real contribution at the local level to the quality of water.

Finally, I would like to suggest that we make the acceptable level of lead in drinking water as close to zero as analytical techniques permit and we believe that a reasonable limit would be ten parts per billion, .01 milligrams per liter in place of the current recommended level of 25 parts per billion. The standard set under the NIPWR is now 50 parts per billion.

Thank you, sir.

Senator DURENBERGER. Thank you.

Let me just ask one question that picks up on that latter point, which is the willingness of the consumer to pay for the things that they assume to be free.

Mr. Dixon, let me ask you for your comments about best available technology are not atypical of water suppliers and water supply groups.

Specifically, opposition to best available technology are a uniform requirement for disinfection and restrictions on standard setting and the establishment of health advisory. Those provisions

were written into the proposed bill to increase public health protection from contaminants that we know are being found in drinking water, protection based on best available technology, taking cost into consideration. It is premised on what we believe to be the amount of protection that consumers want at a minimum, and are willing to pay for.

So, I wonder if your positions are based on your view of the willingness of the general public, or Houston's general public, to pay for economically feasible protection?

Mr. DIXON. I don't think—now, speaking specifically of Houston, please, sir. I know of a number of things around the country from association with other agencies, Houston is a sort of a unique situation. It uses both ground and surface water.

It gets its supply from the Trinity River and the San Jacinto River basin. About 40 percent used is treated surface water. The other 60 percent is ground water from a little over 200 wells that produce on the order of 2,500 to 3,000 gallons per minute each.

Some of those wells actually have arsenic in them. Some of them have fluorides that are over the recommended levels. We have to blend the waters and do other things of this nature to keep within recommended limits.

Now, if you take Austin, they have a different problem there. They get their water directly from the Colorado River and looking back to the THM thing of a couple of years ago, one of the treatments that the agency was going to not recommend or not let be used was chloromines. Austin has been using chloromines for about 30 years and have a very successful program.

So what we are talking about, what we are looking at, is a law or help from the Congress that would allow the agencies who are directly responsible to have some input into what needs to be done and what is best available.

As a for instance, when the CAC's came up the first time, we were in the process of planning a new treatment plant of 100 million gallons a day capacity. It would have increased the cost of that plant by 50 percent if the GAC's were used that the EPA at that time required.

Another instance is in a growing dynamic community like Houston—that annexed a subdivision that had been in for about 10 years. It had two wells there supplying all the water necessary but they were wells that had an overabundance of natural fluorides in them.

After Houston annexed the Water Control and Improvement District—and there are 241 of them in Harris County, where Houston sits, the State came out and made one of their annual inspections of the water quality and they found this discrepancy.

It took a little over a year and a half and over $1 million to construct a line through this subdivision so we could blend water to take care of that one particular contaminant, that the dentists knew about, that the people that were in the area knew about.

We also had to notify the total public that we had this problem with fluorides. Houston has on the order of 385,000 connections in their water system. The State did let us just notify the local area. They did give us a variance there. But that indicates what could have happened on the notification process.

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So we see, the permutations that you get into——

Senator DURENBERGER. Yes.

Mr. DIXON. When you make one requirement of an establishing level, which is best? Or which is reasonable?

Senator DURENBERGER. Max.

Senator BAUCUS. Mr. Tucker, in your prepared statement, near the end, which you did not read but which you summarized, you state and I will quote from your prepared testimony:

> Several government agencies, including the EPA, have used or leaned towards a one in a million excess risk number as a regulatory figure. The major problems with regulation of toxic pollutants with acceptable risks not clearly defined, scientists are hesitant to support acceptance of any risk greater than zero. Conclusion of one in a million figure in New Jersey Safe Drinking Water Act by the two 1980 amendments sets it apart from the federal law which have been bogged down by the lack of a clear definition of risk.

My question is: Why shouldn't that same standard apply to the Federal law, one in a million?

Dr. TUCKER. Well, I understand that some of the proposals for recommended MCL's in the Federal laws actually recommend that very level. From an analytical point of view, it may be difficult to distinguish the amount of chemical between zero and that which represents a one in a million risk.

Senator BAUCUS. My question is: If New Jersey has that standard or that definition, why shouldn't some Federal statutes have not only one in a million but even a tighter standard?

Dr. TUCKER. Well, the one in a million was proposed or enacted in the New Jersey legislature.

Senator BAUCUS. Did that work out pretty well or not? Does that cause problems?

Dr. TUCKER. What I am going to say is that I am very interested in seeing how it works out. Scientifically, it is very difficult. My personal opinion is that we should be working for a very stringent standard.

Senator BAUCUS. So far, you think it is working or not working?

Dr. TUCKER. I believe it is achievable. Where we have had to clean up drinking water with specific contaminants, for example, carcinogens, we have been able to clean it up to that level or better.

Senator BAUCUS. Do you think it is achievable under the Federal statutes?

Dr. TUCKER. Yes, I do. But, as I indicated, there is some difficult science in interpreting what a one in a million risk is.

Senator BAUCUS. I understand.

Dr. TUCKER. Yes, I think it is achievable.

Senator BAUCUS. Mr. Morris, is that correct?

Mr. MORRIS. Yes.

Senator BAUCUS. You made an interesting statement that whether we have a best technology or—what is the other standard—general. And assuming even if we have some kind of best available technology, let's say it results in cutting down a substance, 75 or 95 percent of whatever it was, you asked a very good question, "95 percent of what"?

Mr. MORRIS. Yes.

Senator Baucus. Let me ask you that question: What should that be?

Mr. MORRIS. Well, if you are going to use the best available technology for the establishment of an MCL, and if raw water quality conditions are such that you might have 100 parts of something in the water, removal of 90 percent of the substance will get it down to 10 parts, for the MCL.

If another water supply has 200 parts in it, you only get down to 20 parts with 90 percent removal.

Senator BAUCUS. I understand the problem. What do you think the answer should be?

Mr. MORRIS. Well, I think it really should be based on a health-based standard. In other words, let's find out what the health basis is for whatever the chemical is and then let the industry decide how they're going to meet that standard through whatever technology is available.

Senator BAUCUS. Could you be more precise? What do you mean by "health based standard"?

Mr. MORRIS. One at which there is no adverse effect on the health of persons. That is the standard in the act.

Senator BAUCUS. How do you measure that?

Mr. MORRIS. I am not a toxicologist. I am not a chemist. I really think that risk assessments are one method. I am not so sure that one in a million, or any other number, is necessarily right for every chemical. It is my understanding that there are different degrees of carcinogens, for example, and it might not necessarily have to be the same risk assessment for every one of them.

Senator BAUCUS. Besides risk assessments, can you think of some other complimentary or supplementary standard? Anybody on the panel answer that one?

Mr. ROSOV. I should comment about this, and perhaps Dr. Tucker is better qualified to speak about this than I, but the major ways of deciding about whether something is hazardous, that is toxicological basis or an epidemiological basis, on the one hand, do you do a laboratory study with critters to see what happens to them when you feed them tons of the stuff and the other when you take a broad population selection and correlate it to known contaminant levels? Those are the two principal tools used in determining that. Do you want to take it from there, sir?

Dr. TUCKER. One observation about the New Jersey experience. People have said time and time again that setting a risk is a societal obligation and not a scientific duty. I think it is interesting that the people in the State of New Jersey, through the legislature——

Senator BAUCUS. They made the final decision?

Dr. TUCKER. Yes.

Senator BAUCUS. OK. Thank you.

Senator DURENBERGER. I want to thank you all very much. We do have more questions that we want to propose to you in writing. I am sure you will be more than pleased to respond. Thank you.

The final panel is Mr. Robert Emrie, President of Enviroquip, Inc., Austin, Texas, speaking on behalf of the Water and Wastewater Equipment Manufactures Association; Mr. Fred Elwell, Director of Manchester Waterworks, Manchester, New

Hampshire, speaking on behalf of the Water Utilities Council, American Water Works Association; Ms. Jacqueline Warren, Senior Attorney, Natural Resources Defense Counsel, New York City; Ms. Marilyn Reeves, Director, National Board, League of Women Voters.

We have to vacate the room by 12:30. I would ask you to limit your remarks to 5 minutes and indicate to you that, without objection, your full statements will be made part of the record.

We will begin with Mr. Emrie.

STATEMENT OF ROBERT EMRIE, PRESIDENT, ENVIROQUIP, INC., AUSTIN, TX, REPRESENTING THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION

Mr. EMRIE. Mr. Chairman, and members of the Subcommittee, I am Robert Emrie, President of Enviroquip, Inc. of Austin, Texas, and a member of the Wastewater Equipment Manufacturer's Association, Inc.

WWEMA is a 77 year old organization of over 120 corporations that develop and apply technology for manufacture, manufacturing, and services to the water supply and water pollution control industry. Our plants are located in all 50 States and employ approximately 50,000 people.

Mr. Chairman, we would agree with the concept that this change in the Safe Drinking Water Act should be implemented in order to expedite the promulgation of the health based quality standards in promoting across-the-board compliance of all the water supply systems in the United States. We feel that our industry will and should, work with all of the entities involved, the EPA and the utilities as a team member to help develop technology and assist in the public education.

We feel that public education is a primary element in the whole program. It must be. As salesmen, we know that it is one thing to develop a product, it is another thing to get the people to like it. We feel that the MCL goals in the national primary drinking water should be applied to all systems, regardless of size. There is no reason to provide more protection to residents served by large systems and relax requirements for small systems.

We feel that the requirements of the act which define the coagulation, sedimentation, filtration and disinfection on surface water supplies as a minimum, is a good requirement. It has been in effect in our State, in Texas, for some time.

We do not support the concept of legislating specific treatment techniques. There is a problem there that we see in discouraging R&D activities within our industry and within other areas in order to come up with more economical methods of controlling and treating synthetic organic chemicals.

We would suggest some language which is related to the GAC item. This language would identify the GAC as the benchmark, rather than a specified technique. This would read, for the purpose of paragraph two, "Any technology, treatment, technique, or other means, as available, taking costs into consideration, for the control of synthetic organic chemicals provided it is at least as effective in

controlling synthetic organic chemicals as the current use of granular activated carbon."

In addition to the granular activated carbon situation, we feel that the water supply professionals are capable and do have the knowledge and expertise to respond with state of the art technology for providing the treatment once the contaminants are identified.

This, in a sense, relieves EPA of some responsibility and allows them to concentrate on application of their resources on developing standards which we feel is their primary mission.

With respect to the "rational basis" language, this has created some controversy. We would like to suggest the following language:

Standards should be set for contaminants for which a preponderance of the evidence indicates potential adverse effects on the health of persons.

Preponderance of the evidence includes but is not limited to consideration of available health studies, technological data and lists of contaminants regulated under other health based statutes. If the Administrator determines that the preponderance of the evidence does not support a finding of potential adverse affects on the health of persons, the Administrator must publish in the Federal Register a determination stating reasons for this decision.

Probably the most important requirement that needs to be built into the act is that there needs to be an information bank developed with respect to the contaminants. This should be developed as monitoring procedes. There should be a record available for all of the water utilities and concerned people in the industry with respect to that gathered information as well as flow data in order to make proper evaluations of the needs and how to address them. Both flow and quality data is necessary.

There are other problems facing the water supply industry that have not been addressed by the bill. The National Drinking Water Advisory Counsel does not include members of our association or industry. The equipment manufacturers who supply the equipment to deal with these problems have not been included.

Therefore the knowledge that they have available has not been used as a resource by this counsel. We suggest that some provision, some instructions be issued in that regard.

We also feel that with regard to the finding, as others have indicated, that the additional cost to meet the standards should be borne by the users. We also feel that there should be a statement with respect to encouraging improved management of the water resources.

We also feel that through these and other methods in a cooperative effort of Congress, EPA, the industry and the public, that an adequate supply of safe drinking water can be provided at an affordable price.

With that, I would say that I thank you for your attention in our comments and suggestions. WEMA would like to request the opportunity to provide additional information for the record on any issues that you might have questions on. I would be pleased to answer any questions that you might have at this time.

Senator DURENBERGER. Thank you very much.

Mr. Elwell.

STATEMENT OF FRED ELWELL, DIRECTOR, MANCHESTER WATER WORKS, MANCHESTER, NH, REPRESENTING THE AMERICAN WATER WORKS ASSOCIATION

Mr. ELWELL. Mr. Chairman, on behalf of the American Water Works Association, I am pleased to have the opportunity to speak to the Committee.

I would first like to state that we strongly support the comments that were made by Mr. Jack Ravan and we feel that many of the comments that have been provided in our testimony, which has been provided to you, echoes similar concerns in relation to the bill.

We believe strongly, that the majority of the proposed amendments are right on target with what needs to be done in reauthorizing the Safe Drinking Water Act. I would refer to Senator Baucus' earlier comment, relative to small systems. AWWA shares that concern.

We would propose, Mr. Chairman, that language be included in the act that would require minimum qualification before we create more of these small systems. We would suggest that minimum qualifications in professional staff be required.

Further, financial arrangements should be made, so we do not continue to add to the more than 40,000 of these systems that are already in place. We strongly support the positions taken in monitoring. We are quite pleased with the language relating to the contamination of water supplies, a concern that our industry has had for some period of time.

We are pleased with the changes in the language with regard to public notification. We, as an organization, have long supported filtration and disinfection. We believe that the act changes provides an intelligent and reasonable approach to this issue by requiring States to identify, through application of criteria established by EPA, those systems which must implement a specific process, such as filtration, in order to provide safe drinking water.

On the required use of treatment techniques, we have similar concerns to those that have been expressed by others. We would suggest that a community water supplier have a period of time in advance of having to deal with that 90-day appeal process if they could show the appeal was based on evidence that the treatment technology would not be effective under local conditions, a specific contaminant is not present, alternate technology is available and feasible or the privacy agency has put in place an alternative strategy with dealing with the contaminant. That would allow a water utility to deal with the issue before being required to put in a treatment technique.

I think a great deal has been said about best available technology and generally available technology. I will leave that comment to what we have said in our submitted testimony. We would expect, perhaps an appeal process in this particular case, might be valuable in obtaining a variance on this particular issue.

In regards to the science advisory board, we believe that—and we recognize the problems that have occurred in the past, but we would still strongly suggest that language should be included that requires them to comment, maybe in the specified period of time

we have some concerns about getting away from sound science, and to our association this appears to be a move away from sound science.

In regards to ground water protection, would echo the earlier comments that one quarter of the mile is not enough protection based on the problems out there. We strongly support not delaying the enactment of the Safe Drinking Water Act. If there are issues relative to ground water that need to be addressed, they should be addressed in a separate forum. We think that we have not addressed reauthorization for long enough. It is time that we go about our business and set MCLs and deal with some of the know containants.

In regard to effective treatment process, AWWA feels compelled to reiterate that we are opposed to listing any specific treatment process in legislation. The law should address the result that is desired and leave the selection and application of technology to the scientific and engineering community aided by the free enterprise system.

In two other areas I would just like to briefly comment that we really think that there needs to be more emphasis placed on health research and anything that this committee can do in achieving that would be helpful.

We also have some concerns about applied research within the industry. We urge the Senator to consider resolution or comment relative to that particular area on research done by the industry.

And lastly, I think it is necessary that we vigorously pursue protection of the source. I would suggest to you that there is going to be some language in the Clean Water Act dealing with nonpoint source pollutants that has direct effects on preventing those contaminants getting into the drinking water in the first place.

I appreciate the opportunity to speak and will be available to answer any questions.

Senator DURENBERGER. Thank you for your testimony.

Ms. Warren.

STATEMENT OF JACQUELINE WARREN, SENIOR ATTORNEY, NATURAL RESOURCES DEFENSE COUNCIL

Ms. WARREN. Thank you, Mr. Chairman. I am presenting the testimony today on behalf of the Environmental Policy Institute as well as the Natural Resources Defense Counsel. Both organizations are working for strengthening amendments to the Safe Drinking Water Act and for measures that will enhance the much needed protection of our ground water resources.

I have lengthy testimony that I am condensing it into 5 minutes. It is really not possible so I just want to pick on a few points.

The first one is that I would like to urge you again to put goals back into the statute. I think goals in the area of drinking water protection is very important.

Just the difference between an MCL and an RMCL, without an overriding goal that what we are trying to get everybody to do is get to that RMCL, I think leaves a great hole there, and we are already seeing, as Senator Baucus mentioned earlier, arguments about how relying on the MCL as the applicable standard of the

Superfund is in a way a license for degrading up to the level because the MCL's are not the best we can see in our drinking water.

And in order to force that and force technology and drive toward the goal that we are all seeking I think it ought to be articulated.

I have recommended in the testimony that the statement of goals, the first two of them that were in last year's bill would be reinstated on this.

On the standard setting issue, I have pointed out several places where the time delays are just so long. Another year has gone by. There is no reason to give EPA 18 months for the first list. They have been working on it for a whole year. They say they are going forward. I think 6 months after enactment and 24 instead of 36 ought to be adequate.

We also should specify how long they have to promulgate from the time they propose, because otherwise, with the 18-month minimum at the end, we are looking at 5, 6, 7 years from the time they say we are ever going to have this standard until it makes a difference in anybody's drinking water.

Also we are suggesting that you just delete the controversial provision of an out for the Administrator not to set a standard for one of the contaminants on the two lists. These are EPA lists. If these substances are of concern to them and candidates for standards, just as this committee and the Congress has told EPA with the Clean Water Act to issue priority pollutants, let's go forward and do it on this schedule.

We urge that you say the same thing to EPA on this thing, "Here are your lists, let's do them." Because last year, one of the reasons that we didn't quite get there, although we get very close is because there was a dispute over the language.

Our suggestion is to simply delete the language and give them their marching orders and enact it.

The second—I should really say that we didn't preface this by saying we think S. 124 is a very good bill. It goes very far along the way that we are all trying to get.

Second, we came very close last year. I hope we will get there this year. The reason that I made this suggestion that the explicit direction of EPA to consider costs in the setting of MCL's is that with the OMB that we have today, with Executive Order 12291 and the process that the agency has been following, the fact that the Congress in this public health law, although they haven't said it in RIFRA and they don't say it in some of the other environmental statutes, is here saying that these are health based standards but instead of taking cost into consideration, in our view emphasizes the cost too much.

OMB has been going through procedures whereby—and they most recently do this with their objection to the regulation of asbestos under TOSCA figuring out that 30 years from now 30 lives maybe lost, give those lives a value, discount that value back at 4 percent a year to present value 30 years, hence until now they have no value.

Therefore the costs outweigh the benefits and we are not going to protect them. I think that is a perversion of what we are all trying to accomplish.

To the extent that specific highlighting takes cost into consideration in the statute drives that process even further away from a health basis. I think it is the wrong way to be going and I would urge you for that reason to take the language out and use the best available technology standard.

You can still consider costs. I am not saying prohibit them from considering costs. I am saying don't highlight it by pointing out specifically in the standard setting language and be sure to consider costs. In fact the bill says that twice.

You know your intention is not to reemphasize the consideration of costs, I would hope it is not anyway. We took language that parallels the Clean Water Act. Look at best available technology as feasible.

"Available" meaning demonstrated to be effective in pilot studies and capable of being achieved by a large suburban water system, provide some language to that effect.

Another issue of great concern to us is the whole question of monitoring for unregulated contaminants. That has some of the same kinds of problems that we saw in terms of the amount of time being allowed. We urge that the time for that also be shortened.

A larger problem that we have is that we believe that every system should have to do one "go around" with one of the ones that are asked to be looked for before any deletions are made. The State of California has a program underway that their State legislature enacted last year. They were supposed to predict and then assign the utilities based on land use, appearance and behavior, commercial activity in the area, what things should be looked for.

And they were very surprised to see how limited their ability to predict really was. And for that reason we urge that everybody do it at least once and then have some knowledgable basis to deciding that frequencies can be reduced, contaminants can be eliminated.

I will defer to the comments of the League on the public notification requirement although we support very strongly direct public notification and expedition in the speed with which the notice is made.

I would like to speak to two other questions that are very important. One of them is underground injection control program. Underground injection of hazardous wastes has been recognized as a major vehicle for the disposal of hazardous wastes.

The 1984 RCRA amendments that we are looking at have banned the injection above and in aquifers. However, both in EPA's regulations and in those 1984 amendments, it seems to say that there is a presumption in favor of underground injection as the preferable method of disposing of hazardous wastes in the ground.

We don't believe that the knowledge about what happens to those wastes under the ground over time is really that clear that we should be encouraging, effectively encouraging that method of disposal.

The differences between the underground injection control program and RCRA are quite different. There is no compatibility requirement. You can inject corrosive wastes into a carbonate formation. The fact that it is dissolving the formation isn't really particularly being considered.

We would urge you to enact compatibility requirements so that the regulations, in terms of financial responsibility, and every other way, other forms of land disposal because it is really only historical accident that underground injection is in the Drinking Water Act rather than RCRA.

And we mentioned a number of proposed amendments dealing with tightening up our control on underground injection and lessening that apparent presumption in favor of that method of land disposal over land filling.

Last point, but by far not the least important, is the matter of protecting critical aquifer areas and getting some ground water planning underway in this country.

I was at a hearing—not a hearing, at a conference on ground water protection in New Jersey last Saturday and people came and spoke about the fact that there is a proposal to site a 1,600 acre sanitary land fill right in the middle of a sole source aquifer designate area in New Jersey.

The sole source aquifer provisions of the Safe Drinking Water Act provide for designation of an area and then have the sanction of possibly cutting off financial assistance to projects that might endanger that aquifer.

Well, there aren't that many federally assisted projects around anymore and a lot of kinds of activities that can endanger the aquifer are State and local activities.

The only way those activities are going to be brought under control and the type of activity such as siting a landfill right in a critical area is if the States are directed to go ahead and identify those critical areas and specify what will and what won't be allowed there.

And while the demonstration program that is in this bill I think is a first step, we would really strongly prefer to see a much broader program of the kind that the House passed in bipartisan legislation in the last session and would urge you to look long and hard at the size of the program that you are enacting.

Because the ground water contamination is, for all intents and purposes, irreversible when it happens—and it is happening—and we really can't keep waiting before we get something going on that.

Senator DURENBERGER. Thank you.

Ms. Reeves.

STATEMENT OF MS. MARILYN REEVES, DIRECTOR, NATIONAL BOARD, LEAGUE OF WOMEN VOTERS

Ms. REEVES. My name is Marilyn Reeves. I am on the Board of Directors of the League of Women Voters of the United States and I am here today representing a quarter of million members and supporters who believe that the Federal Government is the proper level to be setting health standards and it is a waste of governmental resources to have 50 States out there setting standards for drinking water across this country.

I would like to take this opportunity to thank you, Mr. Chairman, and members of your subcommittee for the work that you

have done in recognizing the urgency of enacting a strengthened Safe Drinking Water Act. It is very important that this be done.

We have had too much foot-dragging in the agency, within EPA, within the governmental agency for strengthening this law. We were disappointed last session when we were unable to get the law strengthened, reauthorized and we will do all we can to help you to ensure that this is done in a speedy and very effective way.

We support the strengthening amendments which you have proposed. We will even ask for further strengthening amendments because of the urgency of the task that we face.

You asked a question as you began this hearing, "How safe is our drinking water?" Well, I believe that we can unequivocally say that contamination in the drinking water is not some theoretical problem, it is not something that just rarely occurs. The problem is here. It is now. And it is increasing at an alarming rate.

Wells are being closed. Citizens are being told to boil drinking water that comes from surface supplies. Individuals with private wells have no idea anymore whether there is a threat that faces them. Many of our treatment plants are so old and so inadequate that they frequently break down.

Many large cities deliver unfiltered water through miles of ancient corroded pipes with such inadequate monitoring that there is no assurance that the water quality is maintained throughout the system.

Some cities will spend large sums of money to treat drinking water and then they will store it in an open reservoir, unprotected from air pollutants, from animals and bird intrusion.

Treatment plants operators are frequently ill-trained and ill-equipped to operate and maintain plant facilities and in many facilities water rates are too low to maintain the treatment systems.

In some cities, revenues are still being diverted to other budgetary needs, thus reducing the amount of money available for upgrading and maintenance. Few communities have established effective water conservation programs so the public can learn to evaluate the value of water.

Upgrading of drinking water systems is progressing far too slowly. And the amendments that are before us, Senate bill 124 will go a long way to establish a tone and establish a policy which will indicate the urgency with what needs to done across the country.

I would like to talk a little bit about the standard setting process. Everyone here is agreed that it is proceeding at a snail's pace. And one of the individuals who testified in a previous panel, brought out the true issue here.

The issue is: Standard setting is a societal problem. Standard setting cannot be left to the scientific community and to the experts to determine the actual bodies in the street.

We have one word that has not come up here in this hearing and that is the word prevention. The entire basis of water treatment, going back into the 1917 industry, has been based that we will deliver water which will prevent disease.

We are dealing today with water treatment technology across the country which was installed to prevent bacteriological disease of the 19th century. We have yet to match the problems of the toxic

contamination that we have, the problems that are going to face us in the 21st century.

So we have heard a lot about whether we should have best available technology. We have heard a lot about whether or not the standards setting should be done with the advice of scientific body. We have heard a lot whether we should be demanding that 75 substances, which have already been issued in rule making by EPA, that standards should be set for them.

I would like to say that we believe that all of these things need to be done and they need to be done very quickly because we are now not facing up to the problem which is going to face us very severely in the 21st century if we do not install and deal with the treatment inadequacies that are here and now.

We support the use of the rational basis language. Quite frankly, we do not understand the many objections that are raised by those that oppose it. Claims that it would force EPA to set unnecessary standards fly in the face of our past experience with standard setting and other environmental laws.

Standard setting is a very arduous process and it is not done in a frivolous way. And we cannot imagine that there will be unnecessary standards. The truth of the matter is that there have been far too few standards set for drinking water.

We in the League believe that the public has placed its trust in America's water supply. They take a great deal of pride that they can go across this country and that they can drink water as tourists and it will be safe. They recognize that when they go to foreign countries, this does not happen.

We have a lot of pride and we trust this. But we believe that we must maintain this trust. One of the ways that we must maintain it is to make certain that the American public has available to it, complete disclosure of information about what is in our drinking water, what we know about it and what it is that we don't know about it.

Thomas Jefferson said that, "People are inherently capable of making proper judgments when they are properly informed." We believe that very firmly. It is not just something that we think is out there and a good goal but we cannot ascribe to it.

We believe that if the public is lead to believe that their water is safe and they they find out later that it is not, the trust will be lost forever. And it will be far more difficult then to enact rational standards and to institute cost effective treatment programs.

It is fundamental then that people should be given the best information as soon as possible. We do not believe in alarming people unnecessarily. We believe that the Administrator should be allowed to develop criteria to ensure monitoring results that are solid, verifiable.

We do not think that when we have exceedances of MCL's that we should wait for 3 months before the individuals who drink that found out that the exceedances occurred. We believe these are things which can be done, within the law.

The conclusion then, I would like to state that the time again has come to install water treatment technology that matches the problems of the toxic contamination we face today.

Thank you very much.

Senator DURENBERGER. Thank you all very much for the way you highlighted your testimony and for your full statement.

Max, do you have a question?

Senator BAUCUS. No, thank you.

Senator DURENBERGER. I deeply regret the fact that we have to be out of here right now. I started this hearing promptly at 10. I will continue to try to do that to accommodate all the witnesses. I always feel bad when we have a last group that we can't ever have enough interchange.

Thank you all very much.

[Whereupon, at 12:15 p.m. the hearing was adjourned.]

[Statements submitted for the record and the bill, S. 124 follow:]

STATEMENT OF
JACK RAVAN
ASSISTANT ADMINISTRATOR FOR WATER
U.S. ENVIRONMENTAL PROTECTION AGENCY
BEFORE THE
SUBCOMMITTEE ON TOXIC SUBSTANCES AND ENVIRONMENTAL OVERSIGHT
UNITED STATES SENATE

March 21, 1985

Good morning, Mr. Chairman and Members of the Subcommittee. I am Jack Ravan, Assistant Administrator for Water of the U.S. EPA. Dr. Arnold M. Kuzmack, the Deputy Director of our Office of Drinking Water, is with me this morning. We are pleased to have this opportunity to report to you on our recent activities and to discuss some of the key provisions of S. 124 and other proposed amendments to the Safe Drinking Water Act.

Mr. Chairman, as you will recall, I testified before this Subcommittee last June. At that time, we presented a relatively complete update on the status of our drinking water programs. We also presented the Administration's position on many of the proposed elements in S. 2649, last session's bill. Today, my comments on our program will deal with important activities undertaken since last June. With regard to legislation, the Administration's position on most of the proposals is already well known. Therefore, I plan to spend the majority of my time expanding on the most important provisions in the bill, both those we support and those we do not.

SDWA IMPLEMENTATION

Let me begin with some good news about the implementation of our programs. The State of Pennsylvania took on primary

enforcement responsibility for its public water supply supervision program in February of this year, and becomes the 53rd primacy jurisdiction. On the ground water side, eight additional states have taken on Underground Injection Control primacy since June 1st, 1984. These are Nebraska, Vermont, South Carolina, Rhode Island, Washington, North Dakota, Oregon and Ohio. In addition, South Dakota has assumed partial primacy. This brings the number of States with full UIC primacy to 30, and the number with partial primacy to 6. The rest operate under Direct Implementation (DI) programs. The DI programs took effect within the last eight months, and were fully in place for the entire Nation as of last December. UIC program implementation is on in earnest now, and in the next few years I believe significant improvements in ground water protection will be seen.

Some important advances have taken place here in Washington as well. We are now reviewing comments on the NPRM which we published in the Federal Register proposing Recommended Maximum Contaminant Levels (RMCL's) for the Phase I volatile organic contaminants. We expect to complete our review of these comments early this summer, and, to the extent necessary, draft appropriate enforceable MCL's for proposal shortly thereafter.

We are also seriously considering an expanded monitoring program for unregulated contaminants. This would apply to volatile chemicals which can be measured inexpensively in conjunction with monitoring for the chemicals which may need regulation after completion of our review.

Mr. Chairman, as we discussed last June, we are pursuing the formulation of a scheme to monitor for unregulated contaminants. However, this is a complex process. For example, should a chemical be found in a system's drinking water, we must be prepared to explain the associated health consequences.

Another problem to be overcome when examining unregulated contaminants is confidence in the analytical chemistry which will be done. We plan to stage the monitoring in order to ensure competent analysis and so as not to overwhelm the analytical resources available to water utilities. This will also permit mid-course correction and will allow improvement of analytical methods during the collection of data.

This monitoring for volatile contaminants is a part of an initiative on unregulated contaminants we have been pursuing actively since our discussions with the Subcommittee last June.

We are also undertaking a major survey that I would like to mention. The National Inorganic and Radiation Survey (NIRS) is a two year project that will give us information on the levels and frequency of drinking water contamination due to

inorganic and radioactive chemicals - the data necessary to help determine whether and at what levels to regulate radon and other radioactive chemicals. The NIRS survey has been underway for six months and over 30 percent of the water samples are now in our laboratory. The results of this survey will be used in Phase III of our efforts.

In addition to the NIRS project, we are seriously considering a second major survey which could give us information on the presence of pesticides in ground water.

This survey would have to be especially sophisticated, due to the wide variety of pesticides in broad use and the difficult analytical chemistry which must be used. The form of the survey is being discussed within EPA at this time. Our next step is to actively seek the involvement and expertise of the Department of Agriculture and the US Geological Survey. This would be a major effort, and whatever the form, would not be inexpensive. This study will be a major effort to identify the existence of contamination about which we can now only speculate.

Mr. Chairman, we are also reviewing the comments we received on our ANPRM on Phase II contaminants. We are in the final stages of review and expect to complete our review late this Spring. This second phase of regulations involves approximately 40 microbiological, inorganic and synthetic organic contaminants, including several pesticides.

As a final note on our regulatory efforts, you may be aware of the suit brought by South Carolina with regard to regulation of fluoride which can occur in drinking water at very high levels. Although we have had a standard for this chemical since 1975, we are reviewing it, as we are all our existing standards. EPA settled the suit by agreeing to a specific schedule for a regulatory decision on fluoride in drinking water. We plan to propose an RMCL for fluoride in May and propose an MCL in the fall of this year.

COMMENTS ON S. 124

Mr. Chairman, let me now turn to the major elements of the proposed reauthorization of the Safe Drinking Water Act, S. 124. The Act is basically a sound and workable law, but our experience has shown the need for some adjustments. Of the amendments you have proposed, many appear to us to be useful changes and additions, while there are some we cannot support. In my testimony before this subcommittee last June, I set out the Administration's position on many of the elements which can be found in S. 124. There are four areas on which I will speak today.

TECHNICAL IMPLEMENTATION ISSUES

Mr. Chairman, as you and many others have noted, the pace of regulating drinking water contaminants appears to be slow. It is slow. Perfecting scientific knowledge is sometimes also necessarily slow. However, once the science is adequate,

there is no reason to permit the regulatory process itself to be slow or inefficient. EPA has long sought to streamline the awkward procedure for promulgating drinking water standards.

Three of the proposed amendments would help to accomplish this. First, the bill eliminates the requirement that the National Academy of Sciences propose the recommended maximum contaminant levels. Second, it allows the simultaneous proposal and promulgation of recommended maximum contaminant levels (or maximum contaminant level goals as they are called in the bill) and the enforceable national drinking water standards. Third, the bill removes the distinction between interim and final standards.

EPA continues to support all of these proposals. Although independent scientific opinion on drinking water regulations is useful, having the NAS set regulatory goals is not a workable mechanism. The bill recognizes this, and substitutes an opportunity for EPA's Science Advisory Board to review regulations. The simultaneous proposal and promulgation of goals and regulations should speed up the process and make public comment more meaningful because the goals, the standards and their relationship can be discussed simultaneously. Finally, there is no reason to perpetuate the distinction between the interim standards, promulgated just after the SDWA was passed, and the revised standards now being developed.

In like measure, the added flexibility in enforcement of

MCL's and UIC regulations which would result from several of your proposals is important and has our full support. Among those proposals, the most important is the new administrative order and penalty provision. This authority will remedy a long standing deficiency of SDWA, permitting us to take administrative action in large numbers of straight-forward cases, rather than being forced to resort to court action in every case. This will also be particularly useful in enhancing compliance with monitoring requirements among small systems and injection well operators. A "traffic ticket" approach will speed full implementation of monitoring requirements, an important first step in guaranteeing safe drinking water and full protection from unsafe injection practices.

While we are enthusiastic about the proposed new enforcement powers, we oppose their mandatory use. There were about 64,000 violations of drinking water regulations nationwide last year. Even if EPA's enforcement office had the additional funds necessary to issue that many administrative orders, it would be a waste of resources, and would unduly infringe on State responsibilities. Selective Federal enforcement in delegated States can be very productive, provided we have the discretion to choose the targets.

The Administration also supports a statutory provision for exemption of small systems which are economically unable to comply with drinking water standards, provided there is no unreasonable risk to health. We continue to believe that a

small system, for this purpose, should be defined as one serving fewer than 3,500 people. This is the size at which a system can support a full-time manager and generally charges for water, the two conditions that indicate the minimum technical and financial resources to undertake sophisticated treatment.

We also believe that the amendments tailoring the public notification of violations to the seriousness and frequency of the violation may significantly enhance enforcement. The public's attention should not be diverted by a stream of unimportant notices, but rather focused on those which identify problems with their water supply systems. We support this element of the bill as well.

Mr. Chairman, the technical changes to the law I've just discussed are important, and we support them fully. There are other provisions, however, whose purposes we agree with, but which we can not support.

Consider the mandatory treatment provisions. EPA sees merit in requirements for all public water systems to disinfect and those drawing water from surface supplies to filter where these techniques are necessary to protect public health, but we believe that statutory amendments in this area are unnecessary. We have already published an ANPRM describing the possibility of filtration and disinfection regulations, with provisions for variances. This will be part of our Phase II proposals as well. Publication of the Phase II notice will provide an opportunity for full public comment on the specifics.

Similarly, S. 124 would define GAC for the control of synthetic organic contaminants. We have already published an ANPRM discussing the use of GAC (and comparable control technologies) as part of our Phase I proposals. Opportunity for full public comment on the specifics of using these technologies will assure their use where necessary.

I have already discussed our considerations on monitoring for unregulated contaminants. Such an effort would be based on the existing authority within SDWA. We do not feel that any further authorities would better serve than those now available.

THE BASIS FOR STANDARD SETTING

While the Administration supports streamlining of regulation development, Mr. Chairman, we can not support changes to the basic process which do not enhance our ability to regulate efficiently. S. 124 specifies regulation of contaminants listed in EPA's Advance Notices of Proposed Rulemaking (ANPRMs). The lists described in S. 124 adopt our ANPRM's and therefore are tailored to drinking water concerns. However, as we have said in connection with similar proposed lists in other environmental statutes, as well in our comments last year, we do not think that mandated lists, including the annual listing process required by S. 124, should be used to force regulatory development. They impose unwarranted rigidity and reduce our ability to adjust priorities within the Agency in response to new and emerging problems.

Similarly, we suggest the inclusion of language making clear the Administrator's flexibility not to regulate a contaminant when it is found in very few systems or at very low levels.

Of even greater concern is proposed amendment Number 4 to S. 124 which would dramatically alter the basis on which we select chemicals for regulation. The amendment would require EPA to promulgate MCL goals (RMCL's) and associated standards if "there is a rational basis to believe that the contaminant may have any adverse effect on the health of persons." This would replace the existing provision requiring the Administrator to establish RMCL's for each contaminant which, in his judgment, may have any adverse effect on health.

We strongly oppose this proposal. The amendment, as proposed, would eliminate the Administrator's flexibility to evaluate all available science. It would replace the reasoned judgment of the Administrator with an unthinking rule, forcing him to disregard valid scientific data. It could conceivably force the Administrator to disregard the majority of existing data. It seriously limits the Administrator by forcing him to accept a single rationally based argument, even when it is not supported by the bulk of the scientific evidence. We believe the Administrator should have the opportunity to weigh all the available data and make the most rational decision possible.

The Administration can not support such an unreasonable and inherently irrational approach.

JUDICIAL REVIEW VENUE

The Administration does not oppose the proposed amendment Number 5 which would permit filing of requests for judicial review of SDWA related actions in any appropriate United States Court of Appeals.

CRITICAL AQUIFER PROTECTION

Mr. Chairman, I have been relatively silent on matters related to an expanded ground water program. I understand that a separate set of hearings are being planned by the Subcommittee, and would like to reserve my detailed comments on the proposed ground water elements of S. 124 until that time.

Nevertheless, I would like to point out that EPA has taken a major step in the past year to protect the nation's ground water. At the time of our last testimony before this Subcommittee we were developing an EPA Ground-Water Protection Strategy. That strategy is completed and was released by EPA last August 1984; and we are moving ahead with its full implementation. For example, we have established an Office of Ground Water Protection here in Washington, and a corresponding unit in each of EPA's Regional Offices. In addition, in our efforts to stress our commitment to a closer involvement with the states, we have awarded almost all seven million dollars of available State grant funds, thereby enhancing their ground water programs.

We have taken substantial steps to address the problem of pesticides in ground water and a strategy to approach it by

using the full array of agency authorities is now on the drawing board. A guidance is under development to rationalize all EPA program policy on ground water protection and clean-up, taking the value and relative vulnerability of the ground water into account. Work is underway to review and assess ground water research, monitoring and data management. USGS is helping us in this task. I am very encouraged by the progress that we are making to focus existing EPA authorities on this critical problem. For that reason, I do not believe that new legislation is warranted.

CONCLUSION

Mr. Chairman, this concludes my remarks on S. 124. If you would like to have further information on the potential impacts of these provisions, we stand ready to cooperate in every way possible.

At this point, I would be glad to answer any questions you or members of the Subcommittee might have. In like measure, my staff and I will be happy to meet with you and members of the Subcommittee, as necessary or desirable, on issues related to reauthorization of the Safe Drinking Water Act.

Question: (Mr. Durenberger)

I would like you to explain your statement of support for a statutory provision that would exempt small systems economically unable to comply with drinking water standards, from the requirements of the Act. I believe this category represents about 52,000 systems serving something less than 30% of the U.S. population. These systems are also located in rural areas where ground water contamination is often worse than urban areas.

Does the Agency take the view that people living in rural communities served by a public water system do not have the same right to expect safe drinking water as the rest of the population?

If widespread non-compliance is the problem, I would like to know specifically what we can do to help these systems comply with minimum federal requirements.

Response:

The purpose of the economic exemption process is to identify those systems which can not comply and place them on a schedule which will lead to compliance. In like measure the exemption process would identify those systems which can comply without an exemption and speed them toward compliance with technical assistance and guidance. Exemptions, of course, are limited to only those systems whose contamination does not pose an unreasonable risk to health.

EPA wants to ensure all water systems, large or small, provide safe drinking water to the public. A system which requests an exemption will be required to assess all available alternatives to attain compliance and will get the technical assistance and guidance which will often result in compliance. A system which does not seek an exemption and which does nothing becomes a candidate for enforcement. The system which requests an exemption is more likely to get into compliance quickly than the enforcement case, mainly because the system is put on a compliance schedule and is given direct help. Not all requests for an exemption will be granted, and many won't need them once assistance is provided by the states.

The enticement to get systems moving toward compliance is protection from enforcement suits while they are pursuing a good faith effort to comply as part of an exemption. EPA would like to bring as many non-complying small systems into compliance as possible. We look to the extended exemption process as an important tool by which to promote regular movement toward compliance in systems, despite their finanial difficulties.

Question: (Mr. Durenberger)

When do you expect to propose regulations for a monitoring program for unregulated contaminants?

Do you plan to place only those chemicals for which a health advisory level is available on the monitoring list?

Response:

Proposed regulations for monitoring for unregulated VOCs are being considered for publication this summer along with the proposed Maximum Contaminant Levels and promulgation of RMCLs for our Phase I chemicals.

Placement of chemicals in the monitoring regulations and surveys is to a considerable degree dependent on the analytical methods available. We will strive to have health information available for each of the substances included in the monitoring regulations and Pesticides Survey which was discussed in our testimony.

Question: (Mr. Durenberger)

You indicated that a statutory requirement for filtration and disinfection is not necessary yet a definite problem exists that has not been addressed by the Agency. EPA's own data indicates that from 1971 to 1982 waterborne disease resulted in 85,875 cases of reported illness and that only 1/5 to 1/3 of cases are reported. Therefore, we are talking about an estimated 430,000 to 260,000 cases of disease.

Experts, including EPA staff, seem to agree that the only effective technological means of combatting such diseases at the water system are filtration and disinfection.

The Agency has published an advance notice of proposed rulemaking describing the possibility of filtration and disinfection requirements. Why hasn't the Agency required these basic treatment techniques up to now?

Response:

The National Interim Primary Drinking Water Regulations which became effective in 1977 included two standards for microbial water quality: total coliform bacteria and turbidity. Both are measures of treatment efficiency. To meet these two standards, many water supplies had to install filtration and/or disinfection, and this was the intent of the turbidity standard.

Recent studies funded by the Agency, however, suggest that further improvements may be warranted. Total coliform bacteria which have been used very effectively for several decades to indicate and lead to protection against most pathogens of human waste origin have been found to be of limited utility in predicting the potential presence of several newly recognized pathogens, especially Giardia and some viruses. We have now found cases in which apparently pristine waters have been contaminated by Giardia where wildlife was a principal vector. Based on these data, the Agency is considering a regulation requiring the filtration and disinfection of all surface waters and disinfection of ground waters before distribution to consumers.

Question: (Mr. Durenberger)

There has been some discussion within the water supply industry about establishing an industry-based research program that would be funded with small increases in water rates. The general concept is interesting to me in view of the shortage of Federal dollars for research and the need for more technological knowledge and innovation in the water supply field.

Does the Agency have a position on such a proposal?

If such a program were to be established within the industry, what type of research should be undertaken in order to ensure that the public who would be paying for it would derive benefit in terms of increased health protection?

Response:

The water supply industry, as represented by the American Water Works Association Research Foundation (AWWA-RF), has an industry based research program in place at the present time. In the past two years AWWA-RF has received operating funds directly from Congress. This year it fostered an approach which would generate funds directly through water rate increases. The proposal we have seen is semi-voluntary in nature, but two provisions of the proposals concern EPA. First, the control of the funds would be directed by AWWA-RF, despite the fact that the funds would come from the general public. This does not provide for input or oversite by competent representatives of the general public. Second, the Federal government would be the collection agency and the enforcement authority if a system did not pay up.

If the water supply industry wants to institute a voluntary program which does not require the involvment of the federal government, it could lead to valuable new information, some of which might be of use to EPA. Water supply industry groups other than AWWA-RF support a purely private sector initiative.

With regard to the type of research to be established, the areas most likely to ensure bonafide protection of public health would be those which demonstrate the efficacy and efficiency of technologies and monitoring techniques not now in use, but with promise for addressing known contaminants of drinking water.

Question: (Mr. Baucus)

At the March 21 Subcommittee hearing on the Safe Drinking Water Act Amendments of 1985, you stated that cost is not a constraint in establishing Maximum Contaminant Levels. If cost is not a constraint, what justification is there for retaining the statute's current cost-consideration language in section 1412?

Please provide a description of each instance in which any cost consideration was utilized in the preparation of the Maximum Contaminant Level; and the extent to which cost was a factor.

Response:

When we stated that cost is not a constraint in establishing Maximum Contaminant Levels, we did not intend to leave you with the impression that there are not significant costs associated with achieving drinking water standards. Although we consider costs when setting standards, to date cost has not been the driving factor behind chosing a particular MCL. Rather, treatment technologies have been available to achieve the range of MCLs considered at reasonable cost.

Under §1412(b), standards (MCL's) are to be set as close to health goals (RMCL's) as feasible with the use of best generally available technology, treatment techniques and other means (taking cost into consideration). Costs were considered when the interim standards were developed (1975), when the THM standards were prepared, and now while the VOC standards are being considered. EPA described its consideration of costs in detail in the preambles to its final rules for the Interim Regulations (40 FR 59566, December 24, 1975) and the Trihalomethane Regulation (44 FR 68624, November 29, 1979).

To be meaningful and enforceable, drinking water standards must be feasible to comply with, and at reasonable cost. Experience shows that when such considerations are ignored in regulatory programs, the programs do not achieve their goals. If Congress were to eliminate the language "taking cost into consideration", EPA could be forced to set standards so stringent that they would not, in fact, be observed.

Question: (Mr. Baucus)

Has EPA encountered a situation where the maximum contaminant level using optimal treatment technology clearly poses a health risk higher than for example the commonly accepted cancer risk of 10^{-6}?

Please submit a list of all substances for which a Maximum Contaminant Level (MCL) has been proposed or promulgated. For each such substance, indicate the degree of risk associated with each. In addition to this list, also separately state the names of substances (for which an MCL has been issued) having a risk greater than 10^{-6}. Please repeat this process for RMCL's.

Response:

To our knowledge, a "commonly accepted cancer risk" level has never been set by EPA, nor has such a standard been set for any Agencies.

With respect to drinking water standards, EPA has two regulations which control known or possible carcinogens, those for THM's and those for radium. However, point estimates of the individual risk posed at the level of the MCL must be discussed in light of the very large uncertainty which surrounds such estimates. Risk extrapolations are attempts to project potential incremental risks from the high dosages usually used in animal studies to the low doses associated with environmental exposure to potentially toxic or carcinogenic substances. Numerous methods exist for estimating health risk and they often differ substantially from the hypothetical risks associated with lifetime exposure. This is because they have different functional forms or different curves on the dose vs response plot and they employ different assumptions. The models are not biological models of the underlying process and they are generally not experimentally verifiable at the levels of exposure typically encountered in the environment. Further, even if a single model is used, uncertainty in other assumptions can cause risk estimates to vary by factors of 100,000.

While these risk estimates are subject to scientific uncertainty, the use of risk assessment in the decision process is the only available means at present of measuring the magnitude of the health hazard from these substances. It is important to assess these risks because of the wide variation in the likely exposure (incidence and level of contamination) and the potency of these substances. This allows the agency to direct scarce societal resources towards those drinking water contamination problems posing the most serious threats to public health.

Chloroform, the predominant THM, is a substance regulated as a potential carcinogen. Chloroform is produced during chlorination that is essential to protect against waterborne disease, which is a high risk in the absence of adequate treatment. The interim standard of 1979 was 0.10 mg/l. Using one of the more conservative models, a lifetime risk of about 1 in 10,000 was calculated at the time.

The radium interim regulation also involved a nominal incremental lifetime risk calculated at about one in 10,000. In that case it was projected to a risk reduction of about four cases per year in the U.S. The risk calculations were not the basis for either of these interim standards (chloroform and radium).

With regard to RMCL's, none have yet been set. Our Phase I regulatory package is under review at this time. For those chemicals which pose a known or probable risk of cancer, EPA proposes a RMCL level of zero in the NPRM for Phase I.

Question: (Mr. Baucus)

In your view do maximum contaminant levels serve as suitable standards for determining cleanup decisions under Superfund and RCRA? In your view is it appropriate to apply them this way?

The Superfund Amendments of 1985, if enacted, would rely on the Safe Drinking Wate Act for its health-based standards. The EPA has, to date issued standards for very few contaminants. What effort are you prepared to make to promulgate more standards so that parties cleaning up Superfund sites will have a more specific drinking water goal to attain?

Response:

The Interim Maximum Contaminant Levels are set to protect public health to the extent feasible. The Revised Maximum Contaminant Levels will be set as close to the RMCL's as feasible. EPA believes these standards will adequately protect public health from contaminants in drinking water.

RCRA and CERCLA require EPA to establish hazardous waste regulations and take remedial action as necessary to protect public health and the environment. The RCRA regulations require EPA to specify concentration limits in ground water which may be a MCL, an alternate concentration limit, or the background level. (40 CFR §264.94)

When making Superfund decisions, EPA has considered MCL's in determining what level of clean-up is necessary to protect public health and the environment. EPA has also proposed amendments to the National Contingency Plan which would generally require selection of a remedy which attains or exceeds applicable or relevant Federal public health or environmental standards. MCL's are explicitly mentioned as one such standard. (50 FR 5862, February 12, 1985). However, under the proposal, EPA would not be required to meet applicable or relevant federal standards where attainment of the standard is technologically impractical, would cause unacceptable environmental impacts, involves an interim remedy, or where selection of a lesser remedy is dictated by considerations of fund balancing or an enforcement action under CERCLA §106.

A second issue is whether there will be a sufficient number of drinking water standards to ensure adequate protection of public health during CERCLA remediation. The current agenda within EPA consists of four phases of drinking water regulations.

Phase I considers nine frequently found solvents. Phase II will readdress the interim standard for inorganic contaminants, microbiological contaminants and pesticides. Phase II will also consider a number of additional synthetic organic compounds (SOC's), predominantly pesticides and solvents. Phase III will deal with radiological contaminants, again a rare CERCLA problem. Phase IV will reconsider disinfection by-products. Still other contaminants may be considered in yet later regulatory initiatives (Phase V and beyond).

We therefore believe that there will be drinking water standards to respond to the needs of these programs where they are applicable and relevant.

Question: (Mr. Baucus)

How does EPA proceed to determine what contaminants may be found in drinking water, and selecting those for which standards may be required?

What thresholds of risk are applied, and what constitutes frequency and occurence data adequate to justify standard development?

In the case of the standard for THMs, a cutoff point of populations of 10,000 was applied to determine who would have to meet the requirements. How was this threshold arrived at?

Is there evidence that THMs do not occur in water systems serving 10,000 persons or less?

Response:

EPA bases its decision to pursue regulations on exposure and toxicity factors. EPA collects and produces information from various sources on contaminants that may be found in drinking water. Our Research and Development Program develops analytical methods and then applies them to waters in the course of research investigations.

Our Drinking Water Program has conducted numerous national surveys covering thousands of public water systems to provide data bases on actual occurrence frequency and populations exposed. We feel these are our best sources of valid statistical data. Examples of these include the National Organic Monitoring Survey of 1978, the National Screening Program of 1980 (mostly pesticides), the Community Water Supply Survey, the Ground Water Survey of 1982 (1,000 locations), and the current National Inorganic and Radionuclide Survey (1200 locations). The Drinking Water and Pesticides Programs are now jointly preparing to undertake a comprehensive Pesticides Survey for up to 60 substances that may be capable of migrating to ground water.

We also obtain data from State reports of identified contamination as well as from the daily requests for assistance that we receive.

In addition to the actual data bases we examine figures on production volume, use patterns and other characteristics of substances to determine whether there is a reasonable possibility of significant contamination of drinking water.

Specific risk thresholds are not used as the basis for selection for regulation. Rather we set priorities based upon exposure potential and toxicity.

The 10,000 population threshold for the interim regulation for THMs was based upon two essential considerations: likely exposure and protection from biological waterborne disease.

The covered population was estimated to be 162 million persons or about 85% of the population covered by the Safe Drinking Water Act. The remainder (smaller than 10,000 population) are in the smallest water systems, the great majority of which use ground water supplies which are unlikely to generate high THM levels.

Of greater concern was the fact that smaller systems would have the least capability of safely dealing with treatment modifications that might be involved. Some of these systems might decide to stop chlorination or make other changes that might actually increase the risk of waterborne infectious disease.

EPA carefully weighed the matter in the regulation and made the best public health judgment. States were advised that they had the option to deal with the smaller systems on a case-by-case or other basis.

As EPA reconsiders THM regulations as Phase IV of its agenda, the appropriateness of extending requirements to small systems will also be reexamined.

Question: (Mr. Baucus)

I am troubled by your assertion that systems serving 3,500 people or less should statutorily be exempt from compliance with drinking water standards. Your statement is predicated on two factors, that the systems be restricted to those which can't economically comply with standards, and that no unreasonable risk to health be posed.

Are you suggesting that a different health standard be applied to small community systems than is applied to larger ones?

How would the health and economic criteria be set? What is the policy rationale behind this proposal?

Response:

The purpose of the economic exemption process is to identify those systems which can not comply and place them on a schedule which will lead to compliance. In like measure the exemption process would identify those systems which can comply without an exemption and speed them toward compliance with technical assistance and guidance. Exemptions, of course, are limited to only those systems whose contamination does not pose an unreasonable risk to health.

EPA wants to ensure all water systems, large or small, provide safe drinking water to the public. A system which requests an exemption will be required to assess all available alternatives to attain compliance and will get the technical assistance and guidance which will often result in compliance. A system which does not seek an exemption and which does nothing becomes a candidate for enforcement. The system which requests an exemption is more likely to get into compliance quickly than the enforcement case, mainly because the system is put on a compliance schedule and is given direct help. Not all requests for an exemption will be granted, and many won't need them once assistance is provided by the states.

The enticement to get systems moving toward compliance is protection from enforcement suits while they are pursuing a good faith effort to comply as part of an exemption. EPA would like to bring as many non-complying small systems into compliance as possible. We look to the extended exemption process as an important tool by which to promote regular movement toward compliance in systems, despite their finanial difficulties.

Question: (Mr. Baucus)

There is a dearth of toxicity data on chemicals, which impedes regulation of substances under the Safe Drinking Water Act. One means of generating this data, without unduly taxing limited Federal resources, is to rely on the Toxic Substances Control Act section 4, which governs testing of chemicals. You indicated at the Subcommittee hearing on March 21, 1985 that your office had not availed itself of this opportunity. Now that this option has been brought to your attention, what specific steps have you taken or do you intend to take to generate essential toxicity data through section 4?

Please provide a list of chemicals under any review by any persons in the Office of Drinking Water for which there is no toxicity data (or such available data is inadequate) that could be generated by section 4 of the Toxic Substances Control Act.

Response:

We are aware of the section 4 provisions of TSCA and we make regular use of the data that is developed under TSCA. Routine reports are given to us for our comment, and we have requested the raw data and data summaries when appropriate.

Five channels are currently used to develop information useful for the preparation of standards, health advisories or to determine that no action is needed.

The first is mainly a data gathering and summarizing excercise that is peformed by the National Academy of Sciences. They issue reports that are the volumes called Drinking Water and Health. The Academy has made specific research recommendations that we try to implement.

The Office of Pesticides Programs supplies us with registration information on pesticides. If there is a specific data gap that we identify, the manufacturer can be required to generate the data. (Aldicarb is an example.) Currently they are assembling data on atrazine and simazine for our use.

The Office of Pesticides and Toxic Substances has been our contact to request that the National Toxicology Program test chemicals for us. The NTP has tested and is now testing chloroamines, bromoform and other trihalomethanes at our request.

A fourth method is to request our Office of Research and Development perform or contract out required experiments. This has been done for carbon tetrachloride, 1,1-dichlorethane, chloroform and other chemicals at our request.

Some chemicals that could be considered for testing under section 4 of TSCA are molybdenum, nickel, antimony, vanadium, adinates, phthalates, hexachlorocyclopentadiene, gasoline and diesel fuel #2. We will examine the appropriateness of TSCA section 4 for this purpose.

Question: (Mr. Baucus)

Please state the agency's policy regarding risk rates and their consideration in the development of Recommended Maximum Contaminant Levels and Maximum Contaminant Levels.

Response:

In general, we set RMCL's to prevent known or anticipated adverse effects with an adequate margin of safety, in accord with the statute. We set MCL's as close to RMCL's as is feasible.

EPA does not have a policy on what an acceptable risk rate should be. Risk management must routinely be done on a case-by-case basis. Each case will have features that are distinct and require individualized attention. For example, the estimated risk of exposure to trihalomethanes (THM's) permitted under drinking water standards is greater than the risk we may propose for other MCL's. This is because there is an off-setting risk of disease associated with limiting the use of chlorine disinfectants. It would be possible to reduce THM's further, for example, by limiting use of chlorine; however, the risk of microbiological contamination rises with each increment of reduction in disinfectant level. The eventual risk permitted is a function of the competing resultant risks, the ability to reduce risk, the affordability of unit risk reductions and related matters which may ease or limit risk reduction.

ASSOCIATION OF METROPOLITAN WATER AGENCIES
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MEMBER AGENCIES
The Water Works Board of the City of Birmingham, AL
Anchorage Water & Wastewater Utility, AK
Phoenix Water and Wastewater Department, AZ
Tucson Water, AZ
Los Angeles Department of Water & Power, CA
San Bernardino Municipal Water Department, CA
The Metropolitan District (Hartford Co.), CT
South Central Connecticut Regional Water Authority, CT
Tampa Water Department, FL
Atlanta Water Bureau, GA
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Chicago Department of Water, IL
Council Bluffs Water Works, IA
Anne Arundel County Department of Utilities, MD
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Memphis Light, Gas & Water Division, TN
Nashville Department of Water Sewerage Services, TN
Fort Worth Water Department, TX
Houston Department of Public Works, TX
Salt Lake City Public Utilities Department, UT
Norfolk Department of Utilities, VA
Seattle Water Department, WA

STATEMENT OF SAM B. DIXON

PRESIDENT

ASSOCIATION OF METROPOLITAN WATER AGENCIES

ON THE

REAUTHORIZATION OF THE SAFE DRINKING WATER ACT

BEFORE THE

SENATE SUBCOMMITTEE ON TOXIC SUBSTANCES AND

ENVIRONMENTAL OVERSIGHT

MARCH 21, 1985

Mr. Chairman and Members of the Subcommittee, I am Sam B. Dixon, President of the Association of Metropolitan Water Agencies. I also serve as Assistant Director of the Department of Public Works for the City of Houston, Texas. I very much appreciate the opportunity to appear before you today on behalf of our member agencies.

The Association of Metropolitan Water Agencies was formed in June 1981 to serve as a voice for publicly-owned water supply agencies in the Nation's larger metropolitan areas. Member agencies of our Association are responsible for providing high quality, safe drinking water to more than 43 million people in 44 cities.

Mr. Chairman, we support the goals of the Safe Drinking Water Act and its reasonable implementation. AMWA has been working closely with other associations as well as representatives of the environmental community in order to develop a strong coalition of support for reauthorization of the Safe Drinking Water Act. We will continue to work with these organizations as well as other interested parties to help insure speedy approval of SDWA legislation.

Our comments today will be directed toward specific provisions of S. 124 and on proposed amendments. We will also provide comment on specific areas of the Act where we believe there are opportunities to improve its effectiveness.

NATIONAL DRINKING WATER STANDARDS

AMWA strongly supports speeding up the process of setting national drinking water standards. We share your concern about the slow progress being made in

setting standards under the Safe Drinking Water Act and commend this Subcommittee for developing a procedure to expedite this process. We are also making an effort, with the organizations I mentioned previously, to develop a process that meets the needs of the utilities but at the same time insures a safe drinking water supply to the public.

We would also like to point out at this time, that in the long-run it is only through scientific research that progress will be made on establishing drinking water standards which accurately reflect the health effects of contaminants. We hope the Subcommittee will give serious consideration to increasing the role the scientific community plays in the safe drinking water area.

AMWA wholeheartedly endorses the goal that all public water systems provide drinking water free of any contamination that scientific evidence indicates "may have any adverse effect on the health of persons."

AMWA commends the Subcommittee for eliminating some of the confusion surrounding the development of standards and goals. The Senate bill, as introduced, changes the name of RMCLs to "maximum contaminant level goals" and further differentiates between goals and standards by requiring the simultaneous promulgation of standards and the publishing of goals. While we would prefer a single standard, we believe that this provision would go a long way towards distinguishing between standards and goals, thereby assuring the public that public water supplies not meeting goals are safe. Setting mandatory limits does much more to protect the public health than setting unattainable goals for which no scientific basis exists.

STANDARD SETTING PROCESS

We believe that S. 124 as currently drafted goes a long way to insure that standards are set in an expeditious manner. We are very concerned, however, about language included in an amendment to S. 124 requiring the EPA Administrator to establish goals and primary drinking water standards for a contaminant unless he can state "that there is not sufficient evidence to constitute a rational basis to believe that the contaminant may have any adverse effect on the health of persons." One reading of this language suggests that the EPA Administrator may be required to set standards for virtually every contaminant even in cases where there is significant scientific evidence demonstrating no adverse health effects.

In short, Mr. Chairman, we are concerned about using language in the Safe Drinking Water Act that is vague and illusive. Our Association, without success, has attempted to gain a clearer understanding of the meaning of the rational basis test as used in the amendment. It is our belief that by including this language -- which is as yet undefined -- we will be allowing lawyers and not scientists, to determine if a contaminant poses a threat to the public health.

Our primary objective under the SDWA should be to provide our citizens with safe drinking water by removing contaminants, which may, to the best of our knowledge, pose an adverse effect on the health of persons. AMWA has in the past and continues to support development of a procedure which will speed up the standard setting process. We believe that the rational basis language will only serve to slow down the process through lengthy administrative and legal proceedings.

The standard setting process, under S. 124, would finalize all interim primary drinking water regulations upon date of enactment. Within 15 months of enactment, EPA must simultaneously propose maximum contaminant level goals and standards for the 14 contaminants listed in the March 4, 1982 ANPRM; within 36 months, EPA must follow a similar procedure for contaminants listed in the October 5, 1983 ANPRM; and finally, the EPA Administrator must publish a list by January 1, 1988, and annually thereafter, establishing contaminant priorities.

The Administrator then has 3 years from the listing of a contaminant to either promulgate standards or make a determination that such regulation is not necessary. We believe this to be a practical, workable approach to expediting the setting of standards.

AMWA would like to recommend, however, that the future listing of contaminants by the EPA Administrator be based on the results of monitoring as required in Section 7 of Senate Bill 124. This approach would avoid the listing of contaminants not found in drinking water supplies and give priority to those contaminants that are found in drinking water systems that may pose a threat to the public health.

AMWA also recommends, as we have in the past, that for purposes of regulation, a three-tiered approach be used similar to that recommended by EPA. Tier I would contain national standards and national monitoring requirements for contaminants with demonstrated health effects and widespread occurrence; Tier II would contain national standards and flexible monitoring requirements for

contaminants with demonstrated health effects and only regional occurrence; and finally, Tier III would include non-regulatory guidance or "health advisories" as they're currently referred to, for those contaminants not included in Tiers I and II. In our view, non-regulatory guidance should only be allowed if EPA sets standards for Tier I and II contaminants.

COST AND TECHNOLOGY CONSIDERATIONS

AMWA supports the promulgation of MCLs based on generally available technology with cost as a consideration as provided for under existing law. We also recommend that the Subcommittee provide a definition for "generally available" which can be used to identify treatment processes for establishing national primary drinking water standards.

Senate Bill 124 would amend this provision by requiring the development of standards based on best available technology taking cost into consideration. Although we recognize the necessity of moving ahead with standards based on technology, we are concerned that the use of the best available terminology will result in the costly installation of exotic treatment devices which may or may not enable us to meet the standards set by EPA and may or may not have any relationship to the health effects of a given contaminant.

Mr. Chairman, we feel there must be a more reasonable approach to the standard setting dilemma we face. We believe that more emphasis should be given to the development of sound scientific health effects data, if not through the National Academy of Sciences, then through some other research organization. Secondly, if the Subcommittee is truly convinced that using the word "best"

instead of "generally" will allow for the development of standards with greater credibility or reliability, we strongly urge the Subcommittee to provide us with a definition for "best available" technology to be used in the development of primary drinking water standards. Such a definition should insure that the best technology is available, has been shown to be cost-effective, and has been tried, tested and implemented at a level and scale comparable to most major public water supply systems.

Another related issue being considered by this Subcommittee is the inclusion (in the Safe Drinking Water statute) of specific reference to certain treatment technologies. Since no one treatment technology is the most effective technology for the treatment of all drinking water supplies, AMWA recommends that the EPA Administrator retain existing authority to determine treatment technology requirements.

We also have some concern with the language under Section 2 of S. 124 which specifies G.A.C. as a feasible technology in establishing maximum contaminant levels for drinking water contaminants. The bill as drafted implies that G.A.C. will remove all synthetic organic chemicals; however, this technology may be limited in its effectiveness for certain classes of SOCs. We believe that further consideration needs to be given to the possible impact that this provision would have on the ability of public utilities to meet standards set under this approach. Mr. Chairman, we would be very happy to work with the Subcommittee to further explore this issue in order to determine the best, practical solution.

TREATMENT REQUIREMENTS

Although AMWA does not support including specific treatment technologies in any SDWA legislation, we feel the provision in S. 124 which requires the EPA Administrator to propose and promulgate drinking water regulations specifying criteria under which filtration is required as a treatment technique is a reasonable means of approaching this issue. This provision requires the EPA Administrator to consider the "quality of source waters, protection afforded by watershed management, treatment practices (such as disinfection and length of water storage) and other factors relevant to the protection of health." In states with primacy over SDWA, states may require studies or other information to assist in making the determination of whether filtration of the water supply system is necessary.

The filtration provision of S. 124 allows public water suppliers with high quality drinking water sources to continue to protect their water supplies through various treatment techniques, watershed controls and monitoring. On the other hand, those public water supply systems, found not to offer the protection needed to safeguard the public health, will be required to do so. We feel that the public, who also happen to be our rate-payers, would applaud this approach and be grateful that their hard earned money will not be used for the application of unnecessary and costly technology but at the same time insures them of a safe source of drinking water.

This provision, Mr. Chairman, offers a reasonable approach to filtration. The Subcommittee may also want to consider this approach for disinfection to insure that valuable resources are used where they are needed most.

MONITORING REQUIREMENTS

AMWA supports the Senate bill's monitoring requirements and believes that the provisions of this section provide the Environmental Protection Agency with adequate flexibility to develop monitoring regulations which meet the needs of individual water suppliers. We particularly wish to commend the Subcommittee for recognizing the importance of the state role in developing monitoring requirements.

AMWA recognizes the need to provide adequate monitoring to assure a safe water supply. We certainly believe in the importance of monitoring for unregulated contaminants and have in the past recommended that EPA be directed to establish a program to monitor various public water systems. We do feel there is a need for EPA to have discretion to establish monitoring requirements because monitoring needs change frequently and are different for various areas and various sources of water.

AMWA also supports the public notification provisions of the monitoring for unregulated contaminant section which requires a water supplier to notify the public of the availability of the results of the monitoring program. We believe that the public must have reasonable, convenient access to water quality information. However, we do feel that it would be counterproductive, confusing and misleading to automatically provide our customers with notification of the results of the monitoring program until a determination is made on the impact the identified contaminants have on the quality of drinking water supplies.

PUBLIC NOTIFICATION REQUIREMENTS

We wish to commend the Subcommittee for including public notification provisions in the Senate bill which go a long way in carrying out our recommendations.

AMWA has been very concerned about the current public notification requirements of the Safe Drinking Water Act. We believe the current public notification requirements in the Act should be changed to distinguish between violations which are minor, infrequent, or procedural, and those which are serious or persistent. The current notification requirements of minor infractions of the regulations is expensive and self-defeating, and should be eliminated.

AMWA has recommended that the EPA Administrator or the state, if it has primacy, be given flexibility to determine when notification is needed. We have recommended a two-tiered approach to notification requirements with the first tier providing for immediate notification of the presence of contaminants with respect to which adverse health effects have been demonstrated. The second tier would provide for more general notification, perhaps annually, of all contaminants found in the drinking water supply, the failure of the systems to conduct required monitoring, and the existence of variances and exemptions.

ADMINISTRATIVE ORDERS

AMWA supports providing the Environmental Protection Agency with the authority to issue administrative orders to enforce the provisions of the Safe Drinking Water Act. However, we believe that the EPA should have the discretion to use

administrative orders when necessary to ensure compliance instead of being required to do so as is currently recommended in S. 124. The primary objective of SDWA is to ensure that the public has a safe supply of drinking water and, when actions other than lengthy and costly court proceedings will achieve this end, the EPA Administrator should be permitted to pursue these remedies.

VARIANCES

Section 5 of Senate bill 124 prohibits the issuance of a variance until such time as a water supplier installs the best available technology or treatment techniques regardless of whether their application results in compliance with applicable standards. In cases where it can be determined prior to installation of expensive treatment techniques that the system will still be out of compliance, the EPA Administrator should be provided with the flexibility to determine what reasonable course of action is justified.

This completes my testimony. I would be pleased to answer any questions you may have at this time.

TESTIMONY OF

Dr. Robert K. Tucker
Office of Science and Research
New Jersey Department of Environmental Protection

before the

Subcommittee on Toxic Substances and Environmental Oversight
of the
Senate Committee on Environment and Public Works

March 21, 1985

Mr. Chairman and members of the Committee: Thank you for the opportunity to present views from the State perspective on amendments to the Safe Drinking Water Act. New Jersey has had some particularly difficult experiences with contamination of its water supplies and our citizens are now among the most sensitized to the need for protecting drinking water and assuring its quality and safety. I am Dr. Robert Tucker, Deputy Director of the Office of Science and Research in New Jersey's Department of Environmental Protection. Our Office has played a pivotal role in New Jersey in assessing the potential for public exposure to toxic contaminants and thus the necessity for legislative and regulatory protection of drinking water quality.

In 1975, the National Cancer Institute released statistics revealing that for the period 1950-1969 New Jersey led the nation in overall cancer mortality. These findings were illustrated by maps color coded on a county by county basis. Red represented counties with the highest rates and the predominance of red on the map for New Jersey was certainly a spur to action. Our Office was organized to conduct an aggressive multidisciplinary program to evaluate New Jersey's cancer problem and we began extensive research and monitoring of citizen exposure to toxic and carcinogenic pollutants in the environment. The goals of this continuing research are: increased knowledge of the extent and sources of toxic pollutants, improved regulatory and enforcement efforts to reduce exposure, and a better understanding of the effects of these pollutants on human health

A major part of this research has been the extensive monitoring of the State's water. This includes statewide testing of our ground, surface,

and drinking waters for a wide range of toxic pollutants. I would like to give a brief overview of our results. In presenting these results I would like to stress that they are not unique to New Jersey, but are indicative of a national problem. They clearly indicate the sensitivity of our water resources, and the need for a strong national policy to safeguard human health. Thus we are most supportive of amending the Safe Drinking Act to strengthen the process of setting Maximum Contaminant Levels (MCLs) and protective regulations.

Groundwater

Fifty percent of the nation and sixty percent of New Jersey receives its drinking water from underground sources. Historically, groundwater was assumed to be purer and safer than drinking water from surface supplies. Recently, however, the sensitivity of groundwater to irreversible contamination by industrial chemicals has been demonstrated nationwide. In New Jersey we have tested over 1000 wells statewide for organic compounds, pesticides and heavy metals. These tests revealed the presence of low levels of these contaminants in virtually all areas of the State. One out of every six of the initial 670 wells tested contained one or more of eight volatile organic compounds at concentrations above ten parts per billion (10 ppb). 3.1% of the wells in the study contained these compounds at concentrations exceeding one hundred parts per billion. A number of instances of pesticide and heavy metal contamination were also discovered. It appears, however, that the greatest threats to groundwater are the halogenated volatile organic compounds, such as trichloroethylene and carbon tetrachloride. This is due to the combination of their widespread use, relative ease-of movement,

resistence to breakdown and potential cancer causing effects.

Surface Water

We have also conducted statewide monitoring of surface water. While the dynamics of surface water systems provide some natural cleansing action, it is clear that these systems are sensitive to the threat of toxic chemical contamination. Our State shares with New York the tragic consequences to our commercial and recreational fisheries and the threat to human health resulting from the PCB contamination of the Hudson-Raritan Estuarine System. Dioxin has now also been found in fish from part of this estuary. On the other side of the State, in the Camden area, we have uncovered severe problems of pollution by the pesticide chlordane. These compounds are extremely persistent in the environment and very likely to bioconcentrate in fish used for human consumption. Monitoring of reservoirs in southern and northern areas of the State clearly demonstrated the sensitivity of our watersheds to the threat of toxic chemicals.

Drinking Water

We have conducted extensive monitoring of our public drinking water supplies, both surface and ground, for the EPA list of 129 priority pollutants. In addition, as part of a national study of the relationship between drinking water quality and bladder cancer being conducted by the National Cancer Institute, we have tested every purveyor serving over 1000 people for a list of ten volatile organics.

The results of these tests are sobering. The majority of the finished drinking waters contained low levels of potential cancer causing volatile organics. While many groundwater supplies contained traces of industrial

solvents, the greatest threats to surface supplies are the volatile organic trihalomethanes such as chloroform which are formed by the combination of chlorine with naturally occurring organic material during the chlorination process. Several large public supplies were found to have levels of trihalomethanes exceeding 100 parts per billion, the current EPA standard.

Drinking water quality concerns in New Jersey have been exacerbated in recent years by threats of diminished supply due to droughts, saltwater intrusion into aquifers, and excessive development or demand on some areas. Contamination is even less affordable under these conditions.

Implications of Research and the New Jersey Response

The results of our investigations clearly indicate the sensitivity of our water resources to the threat of chemical contamination. Evidence of toxic contaminants was found in urban industrialized areas as well as the most rural parts of the State. Potential sources range from abandoned hazardous waste sites to individual homeowners' septic systems.

The responses of the New Jersey Department of Environmental Protection to specific incidences of contamination have been as varied as the potential causes. In some instances we have closed individual domestic wells, requiring homeowners to hook up with municipal suppliers. Other times we have initiated major enforcement or clean-up activities to remove potential contaminants. In many cases we have worked with local authorities to determine the most appropriate courses of action which often include long term monitoring, improved treatment, or development of a new source. All of these responses are extremely costly and have been hampered by the lack of federal

standards for toxic contaminants. Recently, we have been challenged in court because we had only advisory maximum levels for contaminants and not standards set by law or regulation.

By far, our most effective long term response to groundwater contamination is prevention. Through the New Jersey Solid Waste Management Act and Federal Resource Conservation and Recovery Act, we have initiated aggressive programs to control the improper discharge and disposal of hazardous chemicals. We have developed a program to identify and clean up abandoned hazardous waste dumpsites which is supported by the New Jersey Spill Compensation and Control Act, the 1981 Hazardous Discharge Bond Act and the Federal Comprehensive Environmental Response, Compensation, and Liability Act. In addition, through the development of a State Water Supply Master Plan we have identified sensitive recharge areas and watersheds to facilitate the protection of critical areas.

This threat of chemical contamination of drinking water is not unique to New Jersey, but a growing national concern which must be addressed with the preventive approach of a strong Safe Drinking Water Act. To insure the safety of the nations drinking water we must aggressively pursue research on the human health effects of toxic contaminants; we must move to protect our sensitive watersheds and recharge areas; and we must continue to develop and assess treatment technologies to efficiently and effectively remove toxic chemicals from our water. Most importantly, enforceable standards must be developed to provide guidance to consumers, purveyors, and regulators and prevent any adverse effects to the health of our citizens.

New Jersey Safe Drinking Water Amendments for Monitoring and Setting Standards

Partly as a result of the findings of our Office and because of concern of citizens and their perception of wide spread problems of pollution throughout the State, and particularly out of frustration with the slowness of the Federal standards setting process, the New Jersey Legislature last year amended our own Safe Drinking Water Act to require the setting of standards and extensive monitoring, by water purveyors, for chemical contaminants in the State's water supplies.

These amendments, commonly referred to as A-280 or the Lesniak Amendments, named for their original sponsor, provide that:

Public community water systems are required to test for an initial group of 22 organic contaminants:

Trichloroethylene
Tetrachloroethylene
Carbon Tetrachloride
1,1,1-Trichloroethane
1,2-Dichloroethane
Vinyl Chloride
Methylene Chloride
Benzene
Chlorobenzene
Dichlorobenzene(s)
Trichlorobenzene(s)
1,1-Dichloroethylene
cis-1,2-Dichloroethylene
trans-1,2-Dichloroethylene
Polychlorinated Bipheryls (PCBs)
Xylenes
Ethylene Glycol
Chlordane
Kerosene
Formaldehyde
n-Hexane
Methyl Ethyl Ketone

The tests must be performed in a state certified laboratory; certification requires compliance with detailed Quality Assurance regulations. The initial testing for the listed substances must begin within 12 months and be carried out semiannually thereafter. Testing at a greater or lesser frequency shall be determined by the Commissioner of NJDEP on a case-by-case basis to insure the public health and safety.

The A-280 amendments require a Drinking Water Quality Institute be established consisting of 15 members. Members include the Commissioner of Environmental Protection, the Commissioner of Health, and the Chairman of the Water Supply Advisory Council, the Director of the Division of Water Resources, the Director of the Office of Science and Research, and the Director of the Office of Occupational and Environmental Health, all of whom shall serve ex officio; and nine appointed members, three of whom shall represent the water purveyors, at least one of which has as its primary water source an underground source; three of whom shall represent the academic scientific community; and three of whom, having backgrounds in environmental health issues, shall represent the public, with one of each group of three set forth hereinbefore to be appointed by the Governor, the President of the Senate and the Speaker of the General Assembly.

The Institute shall make recommendations for the implementation of the Drinking Water Quality Program by the Department. These recommendations shall consist of:

(1) The development of a list of contaminants for which testing shall be required;

(2) The development of maximum contaminant levels;

(3) The development of appropriate testing techniques to measure maximum contaminant levels;

(4) The development of testing frequencies;

(5) The review of all activities undertaken pursuant to the "Safe Drinking Water Act" and any amendments or supplements thereto.

The NJDEP, after considering recommendations of the Drinking Water Quality Institute is required by the amendments to adopt Maximum Contaminant Levels (MCLs) for the organic compounds shown on the initial list.

In addition, the NJDEP, after considering the recommendations of the Drinking Water Quality Institute is required within two years, to adopt rules and regulations which develop, within the limits of medical, scientific, and technological feasibility, a list of those pesticides and related compounds, metals, and base/neutral extractable organic compounds and acid extractable organic compounds which it believes may be found in drinking water and the presence of which above maximum contaminant levels in drinking water, upon ingestion or assimilation, may, on the basis of the best information available, cause death, disease, behavioral abnormalities, cancer genetic mutations, physiological malfunction (including malfunctions in reproduction), or physical deformity. We are also required to establish maximum contaminant levels for each chemical or chemical compound on the list which, with respect to carcinogens, permit cancer in no more than one in one million persons ingesting that chemical for a lifetime, and, with respect to other chemicals or chemical compounds on the list and those carcinogens resulting from compounds with public health benefits, eliminate within the limits of practicability and feasibility all adverse physiological effects which may result from ingestion; provided, however, that in no case shall the standard adopted for any chemical or chemical compound on the list be less stringent than that established for the same chemical or chemical compound by the United States Environmental Protection Agency pursuant to the "Safe Drinking Water Act," or any other federal agency.

No maximum contaminant level need be established for any substance until the presence of the substance in drinking water is established by any test required by this act. The water purveyor must forward all test results to the NJDEP. The NJDEP is authorized to conduct spot checks in order to insure compliance and the accuracy and integrity of the reported results.

Local health departments, in cooperation with the NJDEP, shall develop voluntary procedures for the testing of water for homeowners whose principal source of potable water is a well. This testing is to be paid by the homeowner.

To fund this program there is levied upon the owner or operator of every public community water system a water tax of $0.01 per 1,000 gallons of water delivered to a consumer, not including water purchased for resale.

As you can see, New Jersey has gone ahead on its own in the process of setting standards for organic contaminants in drinking water. This represents, to some degree as I noted above, frustration with the slowness of the standard setting process at the Federal level. It is unfortunate, in my opinion, that we felt compelled to proceed, for there are considerable disadvantages in standard setting on a state-by-state basis. No one state can easily muster the resources for the sophisticated toxicological evaluations necessary for valid risk assessments for all the chemicals needing to be regulated. Moreover, in this day and age of rapid population mobility, national standards make much more sense. In a small state like New Jersey, many of our residents work in neighboring states and travel across state borders is the norm. Thus uniform national standards are much more defensible

in protecting public health; uniform standards also prevent the kind of competitive "blackmail" in which firms threaten to move to states with less stringent regulations where they might get "a better deal."

Difficulties in the Standard Setting Process

In facing the standards setting process ourselves in New Jersey, it is easier to empathize with EPA and to understand some of the reasons for delay in promulgating MCLs. There are tremendous uncertainties in the risk assessment process. We still do not understand all the biological processes involved in cancer causation, although much progress has been made in genetics, cellular physiology, and other research areas related to this disease.

Exposures to toxic chemicals in New Jersey whether through water, air, or diet are an everyday occurrence. Even though we and the State Department of Health have conducted studies at toxic waste sites and have investigated purported cancer clusters, we have yet to convincingly demonstrate direct links between exposure and chronic health outcomes in these situations. This is not to imply that exposure is not a risk, but rather that our epidemiological tools are still too crude to effectively measure endpoints.

The determination of cancer risks in a population as a result of exposure to low levels of carcinogenic pollution is a complex and controversial issue. The evaluation of increased risk is beyond the capabilities of current epidemiological techniques and, therefore, risk assessment models have been developed to estimate effects. Several government agencies, including the EPA, have used or leaned towards the one-in-a-million excess risk number as a regulatory trigger. One of the major problems with regulation of toxic pollutants is that "acceptable risks have not clearly been defined," and

scientists are hesitant to support the acceptance of any risk greater than zero. The inclusion of the one-in-a-million figure in New Jersey's Safe Drinking Water Act by the A-280 amendments sets it apart from federal laws which have been bogged down by lack of a clear definition of acceptable risk.

Underground Injection

Underground injection of toxic wastes is a highly dangerous technique. With the sensitivity of our aquifers in New Jersey we could not tolerate such a method of disposal and thus no injection is legally allowed. In other contexts, however, we have found reliance on the definition of "hazardous" as found in the Solid Waste Disposal Act (section 3001) less than protective of our ground water. I would strongly recommend a careful review of this definition and its consequences.

Aquifer Protection

The Critical Aquifer Protection Area Demonstration Program, as proposed in S. 124, seems particularly appropriate in gathering data on sole or principal source aquifers and in developing strategies to protect groundwater. We strongly endorse the concept of this program, but note that while criteria are to be developed, under section 1428(d), within 12 months after enactment, application for designation of the area, according to section 1428(b), must have been submitted as of the date of enactment yet must satisfy the subsequently developed criteria. Is this not unduly restrictive or exclusive, and perhaps backwards? We would recommend that such a program allow application through the period authorized for funding (i.e. 1986 through 1989).

Thank you again for this opportunity to present comments on amendments to the Safe Drinking Water Act.

DR. TUCKER'S RESPONSE TO ADDITIONAL QUESTIONS

1. When do you expect to promulgate your drinking water standards?

   We expect to propose drinking water standards for 12 VOCs by July 9, 1985. Final promulgation of the regulations should occur by the middle of November, 1985. The 12 compounds are listed under question 3.

2. Why do you believe New Jersey may be able to produce drinking water standards in a shorter time period than the Environmental Protection Agency?

   There are several reasons that New Jersey seems to be slightly ahead of the EPA in producing drinking water standards. The mandate by the New Jersey Legislature of specific dates by which the standards must be set, of course, produces urgency. Secondly, the reviewing process at the state level seems to be much less cumbersome. We do not have to go through the stages of setting recommended levels prior to proposing the MCLs. Nor do we require review by OMB, which currently seems to oe holding up the EPA regulations. Moreover, we will be able to rely on information developed by EPA, the Centers for Disease Control, and other Federal agencies.

3. Do the substances you plan to regulate overlap with the contaminants listed by EPA and included in S. 124?

   Yes. The substances we will require overlay with both Phase I and Phase II contaminants listed by EPA. The enclosed list shows the initial substances which will be regulated in New Jersey.

   1. Trichloroethylene
   2. Tetrachloroethylene
   3. Carbon Tetrachloride
   4. 1,1,1-Trichloroethane
   5. 1,2-Dichloroethane
   6. Vinyl Chloride
   7. Methylene Chloride
   8. Benzene
   9. Chlorobenzene
   10. Dichlorobenzene(s)
   11. Trans-1,2-Dichloroethylene
   12. Xylenes

4. Do you expect that drinking water standards established under the New Jersey statute will be more or less stringent than those to be set under the Safe Drinking Water Act?

   The New Jersey Act requires our regulations to be at least as stringent as those set under the Federal Safe Drinking Water Act. We have been consulting with EPA in the hope of achieving some consistency between the State and Federal standards. One unique part of the New Jersey Act, however, is the mandated 1 in 1 million risk level to be set for cancer causing substances.

STATEMENT BY MR. C. ROBERT MORRIS

NATIONAL ASSOCIATION OF WATER COMPANIES

BEFORE THE

SUBCOMMITTEE ON TOXIC SUBSTANCES AND ENVIRONMENTAL OVERSIGHT

ON S. 124

A BILL TO AMEND

THE SAFE DRINKING WATER ACT

March 21, 1985

Statement to the Senate Committee on
Environment & Public Works

Good morning, Mr. Chairman and Members of the Subcommittee. My name is C. Robert Morris. I am Executive Director of the National Association of Water Companies ("NAWC").

NAWC is a nonprofit association consisting of 280 investor-owned, public-utility-commission regulated, and tax-paying water suppliers who serve over 40 million Americans in 33 states.

Please bear in mind, Mr. Chairman and Members of the Subcommittee, as we have said before, we are suppliers of water. We are not polluters of water, but neither are we manufacturers of water. If we were, we would manufacture only pure water. In fact, we must borrow water from the environment which sometimes has already been contaminated by nature or by man. To place the costs of man-made pollution where they belong, we support the prompt implementation and strong enforcement of the Clean Water Act, RCRA, Superfund, and other such laws at the federal and state level. Where pollution persists, we must purify the water before we serve it to assure there is no unreasonable or even significant risk to health. In that light, the purpose of NAWC and its member companies is the provision of adequate supplies of safe drinking water at a reasonable cost.

NAWC supported enactment of the Safe Drinking Water Act ("the Act" or "SDWA") and will always support its goal "to assure that water supply systems serving the public meet minimum national standards for protecting the public health." We believe

this Act has contributed to the provision of quality drinking water to a greater number of people on a more consistent basis than would have otherwise been the case.

Reauthorization of the Act provides the opportunity to improve it. In this regard, NAWC has met with a broad spectrum of people in Congress, environmental groups, trade associations, and local, state, and federal agencies with an active interest in the Act. We are grateful for this opportunity to share our experience and air our views. I would like to now turn to the specific provisions of S. 124.

MCL Goals

NAWC supports the approach of S. 124, which would establish maximum contaminant level ("MCL") goals for the SDWA in lieu of RMCLs. This would help clarify for state and local authorities the difference between higher-number MCLs which are probably achievable and goals (or as is currently in the Act, RMCLs) which are perhaps ideals. Goals should, of course, be based on the application of sound scientific principles. NAWC also supports the orientation of goals towards preventive actions such as banning or controlling activities that threaten to contaminate groundwater resources. Such a preventive approach is not only cost effective but it is certainly more equitable than allowing pollution to occur and then paying for its clean up.

National Primary Drinking Water Regulations

Section 2 of S. 124 makes several significant modifications to the Act's primary standard-setting mechanisms. I will address each of these individually.

Timetables and Deadlines for Regulation

The bill sets forth an ambitious set of timetables and deadlines for promulgation of national primary drinking water regulations. NAWC will support or oppose future regulatory actions on their merits. The Association will be guided by whether the regulation is founded upon sound science and achievability, not by whether it is promulgated by some arbitrary date. Putting the matter differently, although NAWC does not believe that timetables and deadlines are the most prudent approach to regulation, they are also somewhat beside the point. However, we would like to explain why we harbor a skeptical view of these timetables and deadlines.

Section 2 of S. 124 contain three lists of substances to be regulated under the Act. Each list involves distinct features.

The VOC list calls for EPA to regulate 14 contaminants within 15 months of enactment of S. 124. In its Notice of Proposed Rulemaking, EPA has already indicated that it intends to regulate nine of these. Regardless of what the agency ultimately decides, at least two points are clear. First, with respect to all 14 contaminants EPA has initiated and proceeded with the regulatory process of publishing proposed rules accompanied with a statement of their basis and purpose. Second, the agency's final decision of which contaminants to regulate at what levels will be subject to judicial review.[1/]

1/ The imposition of a "rational basis" test in the Act could
(Footnote Continued)

It would be extraordinary for Congress to intervene now in this process by saying in effect, "regardless of what the administrative record shows and without regard to the expert judgment of EPA, all 14 listed contaminants shall now be regulated." The traditional reason for Congress' imposition of timetables on administrative agencies is to fill a void created by inaction. Where the timetables are also accompanied by specific lists of items to be regulated, such as section 2(b) of S. 124, Congress is addressing the additional concern that the agency's failure to regulate such items is erroneous under the law or at least inappropriate as a matter of policy.

By requiring that all 14 VOCs be regulated Congress is prejudging the law and the facts. Is it filling a void? No. EPA has published and received comments on a proposed rule.2/ Is

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(Footnote Continued)
have the result of narrowing the scope of judicial review. The most common test of the validity of agency action is whether it is arbitrary and capricious. An agency's rulemaking is arbitrary and capricious where the agency failed to consider relevant factors or where its decision is clearly erroneous. A decision is clearly erroneous where the connection between the agency's decision and the applicable record and law lacks a rational basis. It is difficult to see where narrowing the grounds for judicial review is desirable. Such a change in the well established rules for judicial review would almost certainly invite several lawsuits simply to ascertain its meaning and scope.

2/ Section 2(b) might actually slow down the regulatory process. Section 1412(b)(2) of the Act requires that EPA promulgate revised NPDWRs within 180 days of proposing such regulations. The NPDWRs must be proposed simultaneously with the promulgation of RMCLs. Section 2(b) requires VOC regulations within 15 months after enactment. Thus, if EPA publishes RMCLs for a listed VOC within nine months after enactment EPA will have more time to promulgate the final MCL for that contaminant under the bill than it does under current law. This perverse result is
(Footnote Continued)

it correcting an erroneous application of law or inappropriate policy judgment? No. EPA has not yet made a final decision so there is nothing for Congress to correct. With respect to the VOC list Congress is both too late and too early. In short, it is imposing itself upon EPA at the worst possible time!

The next list in S. 124 addresses the existing set of interim NPDWRs. Once again, if the goal is to induce EPA to upgrade and improve existing regulations, the amendment adopts a needlessly complicated and cumbersome approach. Other amendments to the Act called for by S. 124, coupled with existing law, will achieve the desired review and revision, if necessary, of existing NPDWRs.

Specifically, section 2(a) of S. 124 eliminates the distinction between interim and revised NPDWRs. Section 4(d) of the bill achieves the same result with respect to paragraphs (4) and (5) of section 1412(b) of the Act. Paragraph (4) of the Act would now read as follows: "National primary drinking water regulations shall be amended whenever changes in technology, treatment techniques, and other means permit greater protection of the health of persons, but in any event such regulations shall be reviewed at least once every three years" (emphasis added). Since section 2(b) of S. 124 calls for regulations under this list within three years of enactment. In effect the requirement to review and, if necessary, "reregulate" these substances is

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(Footnote Continued)
made more likely by the fact that with EPA time ceilings almost always become time floors.

not changed. The judicial remedy in both cases - failure to perform a nondiscretionary act; failure to meet the timetables - is the same. The only real difference, as previously suggested, is the possible narrowing of the scope of judicial review.

Finally, section 2(b) calls for a generic list of unspecified contaminants. Once a substance is listed, it must be regulated within three years or else delisted. We do not believe this three-year deadline will do much for water quality. Indeed, the prospect of having to face a three-year deadline may dissuade EPA from including many substances on this list in the first place.

Simultaneous Goals and MCLs

NAWC wholeheartedly endorses the approach of S. 124 that requires goals and MCLs to be proposed simultaneously and subsequently promulgated simultaneously. We think that this will streamline, clarify, and ultimately speed up the regulatory process. We also think that it will eliminate a source of confusion with respect to the relationship between MCL goals and MCLs.

Priority List for Review of Substances

NAWC supports the establishment of a system such as that contained in S. 124 which would create a list setting priorities for the review of substances to be considered for regulation. We believe this has the potential to be a huge step forward in improving the regulatory process. It will separate real problems from minor ones and thereby allocate the finite resources of EPA,

the states, and the supplier industry in a way that maximizes protection of public health.

The bill also requires that listed contaminants either be regulated or else removed from the list. In this regard, frequencies as well as levels of contaminant occurrence should be considered, e.g., seasonal or temporary phenomena such as turbidity from spring thaw or storm run-off. It should be made clear that a national primary drinking water regulation is not necessary where the levels and frequencies of a listed contaminant found in public water systems do not represent a threat of a known or anticipated adverse affect on the health of persons. Levels and frequencies of occurrence should also be considered in prioritizing contaminants for regulatory consideration to make sure resources are put to the best use. If a contaminant with health significance is not ambigious, EPA might just set an MCL but let states control the amount of monitoring.

Amendment Number 4 - "Rational Basis" Test

We do have a serious concern that the "rational basis" language in amendment number 4 will not produce action on the part of EPA. Because this language will not be effective, it should not be included in the Act. The language of amendment number 4 would effect a major change in the standard-setting mechanism of the Act. This language is new and ambiguous. At best, the Agency will consume substantial time and resources in discerning the meaning and application of these provisions to the standard-setting process. It is also likely, no matter what EPA does, that the vigorous debate surrounding this language will

simply be transferred from Congress to the courts, thereby further delaying EPA.

With respect to the third list of potential contaminants, EPA can avoid challenges over whether or not a rational basis to regulate exists by simply not listing a contaminant. Nothing in the bill or amendment either avoids this result or requires greater accountability by EPA in its decision whether to regulate a contaminant and, if so, at what levels. The authors of amendment number 4 are sadly mistaken if they believe this rational basis language is the "silver bullet" that, once and for all, will spur EPA into timely and vigorous implementation of the Act.

Apart from the prospect that interpretation and litigation of the "rational basis" test could delay EPA's drinking water program further, we fault this language on the additional ground that it is bad policy. Current law authorizes EPA to regulate any contaminant which "may have any adverse effect on the health of persons . . ." Though we are not seeking to change this standard, we do believe it is insufficiently prescriptive -- i.e., it gives EPA too much discretion to regulate on thin evidence of health risk. The new language in amendment number 4 would make matters worse by requiring EPA to act on thin evidence! It provides that, within prescribed time periods set for different groups of contaminants, EPA must either --

> "[promulgate] a national primary drinking water regulation for those contaminants for which there is a rational basis to believe that there may be any adverse effect on the health of persons . . . or . . . a determination that there is not sufficient evidence to constitute a rational basis to believe

> that the contaminant may have any adverse effect on the health of persons."

The potential exists that, even though a hearing record contained a great deal of evidence to the effect that a contaminant is not harmful, the testimony of one or a few proregulators favoring EPA action would in effect tie the Administrator's hands, for he could not in the face of their testimony conclude there was "not sufficient evidence" for a "rational basis" for regulating. This would enslave EPA to the views of one side in any disputed matter, thereby depriving all other participants in the regulatory proceeding of their right to have their views considered and depriving the public of the independent judgment of its elected and appointed governors. We have absolutely no idea why anyone would imagine this to be a sound way to run a government program. Indeed, we have yet to hear anyone make the case that the existing Act's standard-setting language does not give EPA all the power and discretion it needs.

The standard-setting mechanism of the Act is not "weak". Indeed, much of the problem in implementing the Act could be addressed simply through closer Congressional oversight of this program. For example, section 1450(h) of the Act requires EPA to submit annual reports to Congress respecting the activities of the Agency under the Act with recommendations for legislation EPA considers necessary. We are not aware of any such reports ever having been submitted or even prepared. This point is of no small consequence because one often-stated reason why there are no revised NPDWRs under a law enacted in 1974 is because an NAS study published in 1977 was deficient.

Section 1442 also contains numerous studies and reports for EPA to conduct and submit to Congress. We are not aware that any of these have been done. This is regrettable because these studies and reports would generate the kind of data vital to an effective and efficient drinking water program.

Filtration and Disinfection

Outbreaks and threats of water borne disease are serious concerns that are appropriately addressed by requiring EPA regulations for filtration of public water systems supplied by surface raw water sources. In promulgating such rules the Administrator should be required to consider the source or sources of water, treatment practices, the system's history of compliance with existing national primary drinking water regulations and other factors relevant to protection of health. Existing state programs would fall in this latter category.

Similarly, the bill should establish criteria for allowing relief from a disinfection requirement independently from the variance provisions of section 1415 of the Act. In other words, the bill's provisions regarding disinfection should be changed to read and be applied in a manner substantially the same as the bill's provisions respecting filtration.

With these suggested changes, we think that the inclusion of filtration and disinfection provisions in the Act (with variances in appropriate cases) should provide increased protection of public health while at the same time avoiding regulatory overkill.

Definition of Feasible

S. 124 changes the Act's definition of feasible. It replaces the Act's requirement that technology, treatment techniques, or other means, be "generally available" to one requiring the use of best available technology.

NAWC believes that this modification of the regulatory standard setting mechanism of the Act is not prudent. NAWC is on record with many others who believe that the current Safe Drinking Water Act has not worked as well as it should, but this is not because of any weakness or inadequacy in the standard-setting mechanism. Congress can certainly act to clarify the meaning of the words "generally available." The definitional problem cannot be avoided simply by adopting a best available technology ("BAT") test. This too must be defined. Whether the criterion is "best" or "generally" best is a policy choice that should not turn upon the erroneous assumption that "generally" cannot be defined while "best" can be defined. We believe sound policy favors retention of generally available technology.

The use of BAT appears to be borrowed from the Clean Water Act. BAT is made workable in the context of that Act through the use of "classes and categories" of dischargers. We believe the Safe Drinking Water Act should require the same quality of water from all suppliers and therefore urge Congress to reject an approach that will force suppliers to seek variances en masse.

Another issue which has not been addressed is the method EPA would use to determine an MCL. Since most treatment technologies, whether "generally available" or "best available," achieve

a percentage removal, it is extremely important to know what the assumed raw water quality will be for purposes of applying a percentage to an absolute number in order to arrive at an MCL applicable to everybody. Specifically if BAT for a contaminant has a 95 percent removal efficiency, one must ask, "95 percent of what?" Congress has not asked, and EPA has not answered, this significant question.

The bill wisely maintains the consideration of costs of promulgating MCLs and treatment techniques. As you know, to consider costs is not the same as weighing them. It is unsound in our view to regulate in a manner that could yield standards which will have marginal costs wholly out of proportion with reduction of contaminant levels. The Administrator should be given authority to draw the line at some point. Indeed, whatever faults may lie in the current Safe Drinking Water Act, the consideration of costs in determining feasibility for promulgating MCLs and treatment techniques is not one of them. We are aware of no reference in the record to date to problems which have arisen as a result of this provision of the Act.

As previously stated, NAWC represents investor-owned water utilities. Unlike our municipal counterparts, we have an additional layer of regulation by state public utility commissions. These companies have the burden of proof in rate cases that the expenditures for both capital costs and operating and maintenance expenses are prudent, cost effective, and justified by the benefits. The ability to raise capital in the competitive markets and maintain adequate debt ratings is essential to

providing good service at the most reasonable cost to the customer. If the regulated industry has the requirement to consider costs and benefits, the federal laws which are enacted creating these investment burdens should have the same constraints.

Scientific Review

S. 124 would amend section 1412(e) of the Act to provide that the Science Advisory Board ("SAB") have an opportunity to comment prior to proposal of a maximum contaminant level goal and National Primary Drinking Water Regulation. NAWC strongly believes that goals and regulations should have a sound scientific basis. This foundation should include competent independent peer review. SAB seems to be capable in this regard. NAWC is concerned, however, that the bill is not strong enough in its requirement for SAB review. Specifically, we believe that, as a bare minimum, SAB should be required either to submit its substantive review prior to promulgation of a regulation or a brief statement for the rulemaking record saying why it was unable to provide such review. This latter requirement would put all parties on notice as to why SAB did not act in a timely fashion. We believe that such a simple provision could go a long way toward alleviating some of the uncertainties (and frictions) that undoubtedly will ensue if SAB does not submit substantive comments.

Administrative Orders

NAWC believes that the administrative order provisions of S. 124 could be improved in two ways. First, the word "shall" should be changed to "may" so that the Administrator has

flexibility to utilize his enforcement authority. Second, EPA's administrative order authority should be limited to nonprimacy states. The Act currently contains adequate authority to assure that primacy states are carrying out their enforcement responsibilities.

Public Notification

NAWC, as you may know, has often been critical of the Act's public notification requirements. This is one provision clearly in need of reform. We have carefully reviewed S. 124 and find it to be a major step in the right direction. However, we suggest the sentence requiring notification in a newspaper of general circulation in the case of continuous or serious violations should be deleted. That is, public notification should be tailored to the circumstances creating a need for it. We do hope that the Administrator's regulations are promulgated promptly and that they carry out the intent and spirit of what we believe the bill is trying to accomplish. Serious, frequent, or intentional violations should be treated differently than minor, technical, and unintentional violations.

Variances

We read the bill's variance provision to require the Administrator to define BAT for purposes of granting a variance at the time he promulgates an MCL for a contaminant. We are somewhat concerned with two aspects of such a provision. First, this determination threatens to "lock in" technology that existed at the time the regulation was promulgated. While the Act requires periodic review of revised primary drinking water regulations,

this provision might continue to be ignored. Second, it is unclear what effect, if any, this provision will have on primacy states which are granted the authority to issue variances. There are inherent difficulties in estimating in advance all circumstances under which variances may be needed. The bill may unduly restrict state flexibility to craft variance determinations according to specific local needs. We would like to see a fuller explanation of the intent and purpose of the bill's variance provisions before deciding whether to endorse them.

Finally, the bill appears to reinforce the Act's apparent requirement that water suppliers install a treatment technique before they are eligible to receive a variance due to the poor quality of their raw water source. Rather than a mandatory provision such as this, the Act should be modified to give the Administrator flexibility in determining what measures should be required of a supplier prior to granting a variance.

Exemptions

With respect to the exemption provision of S. 124 we are concerned that the last paragraph not become the major method by which small systems obtain relief on a mass basis from what will undoubtedly be the added regulatory burdens and costs resulting from these amendments.

Technical Assistance

NAWC supports section 8 of the bill. Small systems should receive some form of assistance that will help them to comply with what undoubtedly will be an increased regulatory burden because of the implementation of the Act as amended by this bill.

The authorization of appropriations does strike us as rather inadequate, however.

Tampering with Public Water Systems

NAWC strongly supports section 9 of the bill. We believe that it is important to have a strong federal deterrent against tampering. We do not intend to document individual incidents of tampering in a public forum. Suffice it to say that incidents which have occurred warrant federal action in this area.

Underground Injection of Hazardous Waste

NAWC strongly supports the general thrust of section 10 of the bill. Our one concern is with the "quarter mile" limitation on injection wells. We believe that this arbitrary point of demarcation is not adequately protective of groundwater sources that could be damaged or destroyed by underground injection activity. Bans on underground injection should be determined according to sound geological data. Proponents of underground injection should bear an affirmative burden of showing that their activities will not damage or destroy a drinking water source.

Monitoring for Unregulated Contaminants

NAWC supports a monitoring program for unregulated contaminants. The bill seems to give adequate guidance to the Administrator in formulating such a program. Many of the issues which have concerned NAWC with respect to monitoring proprosals in the past seem to have been addressed in S. 124.

Conclusion

Mr. Chairman and Members of the Subcommittee that concludes my statement. I will be happy to respond to any of your questions or comments. NAWC would also like to reserve the opportunity to submit specific legislative proposals to address the issues raised in this statement.

Mr. Chairman, Honorable Members of the United States Senate and of this Committee:

My name is Eugene Rosov. I am the president of WaterTest Corporation, New London, NH, a company which provides a comprehensive drinking water analysis service to thousands of individuals, state agencies, and major American corporations.

We've tested the water consumed daily by thousands of Americans from every nook and cranny of our country, analyzing it for contaminants such as lead, mercury, nitrates, chromium, bacteria, and other contaminants addressed by the SDWA. We represent the drinking water consumer: their problems are our problems, and while selling only information, we try to guide them to perspectives and solutions.

On the basis of thousands of tests we've done, and the most recent research of noted medical authorities, we believe that lead in drinking water is a dangerous and costly problem affecting a substantial percentage of our people. The Safe Drinking Water Act can address this issue effectively. We shall demonstrate how this can be done in a cost-effective, comprehensive fashion with minor revision of the proposed legislation. This can be accomplished in a fashion consistent with the highest goals of the EPA and of American community water suppliers.

Let me first outline the extent and nature of the problem.

1. A study done by the EPA, the New England Medical Center Department of Pediatrics and the Harvard Graduate School of Education demonstrated a direct correlation between drinking water lead levels and blood lead levels in the Boston area. Drinking water lead levels were shown to be the best environmental predictor of blood lead, significantly exceeding paint, dust, air and pica. Children in the 2-6 year age range are at highest risk.

2. A 1979 study published in the NEJM summarizes "Lead exposure, at doses below those producing symptoms severe enough to be diagnosed clinically, appears to be associated with neuropsychologic deficits that may interfere with classroom performance."

3. A June 1984 study published in the JAMA discovered that "lead was found to be associated, in a dose-related fashion, with an increased risk" for birth defects.

4. The JAMA reported only this year, based on data collected from the National Health and Nutrition Survey, that there is a direct, linear relationship between blood lead levels and hypertension, resulting from exposure to lead by the general population. They reported that levels of lead in blood

considered to be nontoxic -- less than 30 ug/dl -- can still trigger increases in blood pressure. High blood pressure is directly related to cardiovascular disease, a major killer.

5. The Centers for Disease Control recently lowered the definition of a toxic blood lead levels by 30%.

This, then, is the medical evidence: drinking water is an important contributor to blood lead levels. Sub-clinical blood lead levels are related to birth defects, poor classroom performance and hypertension.

How much lead is in our drinking water?

1. An April 1984 study by EPA Region I found that 73% of the representative community water systems surveyed had lead lines connecting the distribution pipes and the buildings.

2. The EPA's comprehensive publication, "Drinking Water & Health," states that "available data generally indicate that the addition of lead to drinking water occurs chiefly in the distribution system, including household plumbing..."

3. WaterTest's representative sampling of public water supplies found 15% with levels over 10 parts per billion, and 6% with levels over the new proposed standard of 25 parts per billion. We found 9% of all private wells over 10 ppb., and 4% of all private wells over 25 ppb. To cite some specific areas: we found 15% of all public supplies in the Boston area in excess of the 25 ppb standard, and 13% of the New York metro area supplies in excess of the 25 ppb standard.

It is worth noting that the New England Medical Center's study reasoned that with drinking water lead at this level, more than 65% of all young children would have unacceptably high blood lead levels -- due to water and other environmental lead sources.

4. According to a principal EPA investigator, "in instances where the plumbing installed is copper with lead soldered joints, it is possible that the members of the household are exposed to high lead levels without their knowledge. When corrosive waters are distributed, high lead levels may continue to persist in the drinking water for several years or indefinitely. "

This, then, is the evidence on lead in drinking water: it enters the water through the corrosion of the pipes -- and the principal contributors to drinking water lead levels are BOTH lead service lines and lead solder joints in household plumbing systems.

At whose door do we lay this problem?

1. The current legislation lays it squarely at the door of the community water supplier alone: the 1975 NIPDWR define a maximum contaminant level as "The maximum permissible level of contaminant in water which is delivered to the free-flowing outlet of the ultimate user of a public water system...contaminants added to the water under circumstances controlled by the user, excepting those resulting from corrosion of piping and plumbing caused by water quality, are excluded from this definition." That is, responsibility for the quality of the water AT THE CONSUMER'S TAP, regardless of the impact of the plumbing in his building on water quality, is the supplier's problem.

2. We believe this is irrational and not in the public interest. Corrosion control of distribution mains can have a negative impact on household plumbing, and vice-versa. An important contributing element in corrosion is the use of different metals -- copper, lead, zinc, steel, iron -- within one system. Should a community water supplier be liable for the choice of plumbing materials in a private building?

3. Most important: laying the problem at the door of a local governmental agency or private supplier furthers the public's view that "government will take care of it." This is the core of the problem -- the public's lack of self-reliance. Fearful of lawsuits, community water suppliers turn their backs on the lead problem as one they cannot solve, and "let sleeping dogs lie."

Our proposal:
1. Make community water systems responsible for the quality of water delivered to the building. This is a reasonable task, and can be achieved in time.
2. Make the individual water consumer responsible for any impact of his plumbing on the water quality delivered to the building. By laying this responsibility at the taxpayer's door, several important changes will occur:

a. The consumer will begin to take responsibility for water quality, and will understand that he must share in shouldering the COST of water quality. Most people feel water is and should be free. We MUST change this perception if progress in water quality is to be made.

b. The consumer will have to become informed about water quality issues, and will understand why his tax dollars should go -- ON A LOCAL LEVEL -- to the protection of community water supplies, the improvement of distribution systems, and the improvement of individual household plumbing systems.

3. Finally, make the acceptable level of lead in drinking water as close to zero as analytical techniques permit. We recommend a level of 10 parts per billion (0.010 mg/L), in place of the current recommended level of 25 parts per billion.

WaterTest℠ CORPORATION

9 April 1985 (202) 224-6691

Hon. Senator Dave Durenberger, Chairman
Subcommittee on Toxic Substances & Environmental Oversight
United States Senate
Committee on Environment and Public Works
Washington, DC 20510

Dear Senator:

Thank you for your letter of April 3, 1985, and for your further queries concerning my testimony on the Safe Drinking Water Act Amendments. I appreciate the opportunity to speak to these issues. I will restate your questions herein and present my answers following each query.

Q: Make some general observations based on your testing experience and the data base you have developed.

A: On the basis of individual (non-business) customer surveys we conducted early this year, our typical customer is a) between the ages of 26 and 65; b) earning over $25,000; c) a public radio/tv listener; d) an "environmental consumer," and e) at least college educated. This is an indication that while we are successful in reaching a geographically diverse group, the poor and lower middle classes cannot (still) afford our testing services, or regard them as a lower priority than sheer survival. When we have provided testing services for the poor (frequently at no charge), we seem (!) to find lead, other heavy metals, and especially microbiological contamination more often than in the water of the well-to-do. Not enough data is in to provide decisive judgments in the relationship between water quality and income level. However, the high concentration of lead service lines and goosenecks in unimproved areas of community water systems may suggest a correlation between lead in drinking water and lower socio-economic status.

Our database has demonstrated the following:

1. Depending upon source, as much as 30% of the tested American drinking water contains measurable, and not infrequently, high levels of lead. (Please note that lead in solution is absorbed in the GIT at 3 to 5 times the levels of other sources.) Higher lead levels are found more frequently in new homes, plumbing renovations, "soft" community water system apartments and houses, and in older cities and new construction (due to lead solder).

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2. The WaterTest active database (as opposed to the archived database) represents some 2,000 randomly drawn samples any given moment. Approximately 15% of the data represent community water system supplies. The proportion of community water analyses and private supplies varies daily.

3. The database represents the nation's largest collection of private supply and community water system water quality data on the water actually being consumed by citizens. Because all analyses are completed in one laboratory under consistent conditions, the quality of the data and its internal validity is high. In addition, WaterTest provides sample collection and preservation procedures and methods that are consistent and generally well-observed by the sample takers.

4. Zip code mapping and DIME file (U.S. Census Bureau system) mapping capabilities are possible, and could be provided to interested governmental agencies.

Q: What are the chemicals people are most interested in having their water tested for?

A: Contaminants of interest are most frequently area-specific. The interest will be a function of media coverage, public awareness and "the contaminant of the month." We find that in the Northeast microbiological and benzene/toluene (gasoline) contamination is of great concern, with pockets of concern for herbicides (from power-line weed control) and nematocides (such as EDB). The South has greater concerns for pesticides and volatile organics (both halogenated and aromatic); the Mid-West is profoundly concerned about nitrate and pesticide contamination. In selected areas where drilling is prevalent, concerns for benzene/toluene contamination (and barium/sodium intrusion) are present. Throughout the U.S. we find increasing concern for trihalomethanes and other chlorination byproducts. In older systems everywhere corrosion by-product contamination is of concern, although the observed problems (red water, black water) are only harbingers of more dangerous (lead) contamination.

Q: What reasons have people indicated for having their water tested?

A: Our customer survey showed the following reasons, in decreasing order of concern, for requesting WaterTest services:

1. Concern for personal health.
2. Concern for the health of family members.
3. Reports of water contamination in the area.
4. Unpleasant tastes or smells in the water.
5. Concern with effects of water problems on home/property values.

We should also mention that our survey showed that 72% believe that government should spend whatever is necessary to ensure good water quality.

Q: Do you receive more requests from urban or rural areas?

A: Last year, approximately 85% of our testing as in the private supply area (individual private wells). Over the last three months, the proportion of requests from community water systems has doubled.

Q: What types of contaminants are you finding in addition to lead and at what frequencies?

A: The question requires geographic, contaminant and frequency distribution answers. More detailed information could be prepared through a close evaluation of our results over the last 6/12 months. However, pollutants of serious concern found in relative high frequencies in broad geographic areas include: coliform and non-coliform bacteria, lead, sodium, nitrates, copper, benzene and toluene, chloroform, trichloroethylene, methylene chloride, vinyl chloride, carbon tetrachloride.

Q: You have stated your view that homeowners should be encouraged to take individual reponsibility for reducing lead in drinking water. How feasible is this approach considering the effort involved in notifying all individuals of the contamination threat, testing hundreds of thousands of samples, and replacing household plumbing?

A: My view is not accurately represented by the first phrase in the paragraph above. Let me answer by responding to both sentences in turn.

I believe that by changing the definition of an MCL, and, in so doing, making the homeowner responsible for the impact of his plumbing (or any other on-site contamination source) on drinking water, the citizen will be drawn in to the proper consideration and maintenance of water quality. The current MCL definition specifically states that "contaminants...resulting from corrosion of piping and plumbing caused by water quality" are the responsibility of the water supplier.

This unreasonable approach has had three negative results:

1. Individuals feel that it is "up to government regulators" to ensure water quality. Quality drinking water is seen as a right to be indiscriminately enjoyed, not a responsibility to be exercised and attended to. The fiscal concommitant is a lack of willingness to pay for water quality and water quality protection at the local, county, and state levels, despite the overwhelming

proportion of individuals (72%, according to our survey and to the Harris poll) who believe that water quality is one of the first concerns of government. When it comes down to paying for water quality, people aren't willing to shell out. Placing the full responsibility on the supplier for water quality at the tap ignores the reality that every building has its own internal plumbing and potential plumbing problems which cannot reasonably be controlled by the water supplier.

For example: we provided a plumbing system survey for a major American high-tech corporation using a community water supplier. This is certainly a company which is technically competent and aware of water contamination issues. Nonetheless, we found that a new 50-foot section of copper/lead-soldered water pipe supplying a drinking water fountain was delivering water at nearly twice the current 0.050 mg/L level of lead. The problem was of course corrected instantly, by using unleaded solder. If this company can make such a mistake, it can -- and probably does -- happen quite easily to anyone.

2. A change in the legislation could significantly help people to understand that they share the burden for water quality in a concrete and important way. If no direct responsibility is taken at the local level, public perception will have the burden drift to Washington, landing at the doors of Congress. The current law makes the EPA and Congress the whipping boys for local problems, which are better addressed at the local level.

3. The current law has engendered a sense of political and environmental helplessness. Every day, people see on television and read in the newspapers about hazardous wastes and drinking water problems. The truth is that individuals CAN do everything necessary, at reasonable cost, to ensure quality water at the tap, even when quite serious problems exist. Devoting local taxes and community effort can only come about with a revision of the SDWA that places real responsibility on the individual.

To respond to the second part of the query (how feasible is this approach given plumbing replacement problems and thousands of tests required?):

1. When problems exist on a massive scale -- such as those in Boston and in Chicago -- treatment of the entire system is appropriate, proper and cost-effective. Developing community awareness remains critical, though: the fact that the plumbing code in Chicago REQUIRES lead service lines is a prescription for mental retardation and neuropsychological deficit. Only the people of Chicago can effect this change. All the SDWA legislation Congress can pass will not alter the situation without an informed electorate.

2. When problems are site-specific, several things can be done (these are listed in order of importance):

a. Make certain that all new copper pipe is installed using tin/antimony or tin/silver solder.

b. Institute a regular replacement program, at the community supplier level, for lead services and goosenecks, in combination with a regular lead testing protocol using the sampling procedure so ably developed by Peter Karalekas Jr./Chris Ryan at EPA Region I.

c. When potentially corrosive waters are distributed in a community water system, a local program of 1) public awareness through media information; 2) lead-solder joint replacement programs in homes and apartment buildings; and 3) public information about the signs and symptoms of lead ingestion in children and adults could be very effective in controlling, funding and ameliorating lead (and other contamination) problems.

d. Develop programs to require testing when properties change hands. Make part of the ongoing property sale process a comprehensive water quality analysis performed by a reputable laboratory.

3. Testing Costs and Procedures:

Current HUD requirements specify that a drinking water analysis be performed on privately supplied homes when FHA/VA underwriting is provided. We suggest that a simple change in HUD regulations requiring lead (and other heavy metals) testing for all properties underwritten by a governmental agency would immediately show up existing problems. Corrective action could be taken -- through sweatjoint-replacement and lead pipe replacement at very moderate cost. Leaving to the local agencies (health officials, county health departments, state agencies) the implementation of new regulations following a national awareness program should be the most effective approach.

Q: Have you any estimates of the range of costs involved for individual homeowners?

A: Water treatment can cost anywhere from $400 to $1200, and there exists effective equipment to solve virtually any pollution problem. A lead-sweatjoint replacement program in an existing property might cost a few hundred dollars at most, and can be readily accomplished by the average handyman for under $50 and the investment of a few weekends.

The most important cost to stop paying is the cost of our rearing, educating, special-educating, institutionalizing and hospitalizing infants, children, adolescents and adults. The

costs are difficult to estimate, but they are well into the billions of dollars. On a cost-benefit basis, preventing neuropsychologic deficit, brain-damage, mental retardation, hypertension, birth anomalies and perhaps even certain kinds of cancer (all correlated to drinking water lead ingestion) will save the taxpayer locally and nationally substantial amounts of money.

Q: EPA staff have indicated that the addition of anti-corrosive chemicals at the system, tied to the results of a regular point-of-use monitoring program, will significantly reduce lead contamination. They cite the Boston experience with lead reduction as one example. Is not this a more feasible and therefore, effective approach to addressing the lead problem?

A: I have dealt with the issue of which supply, what level of lead contamination, earlier in these comments. However, one important point remains to be said. Your phrase above -- "tied to the results of a regular point-of-use monitoring program" -- should be carefully examined. Even the Boston program (which reduced but did not eliminate lead corrosion in MOST cases) had difficulties with establishing 1) a geographically well-distributed monitoring program; 2) a statistically valid number of monitoring points (less than 50 points were used in Boston at most times); 3) enthusiastic participation on the part of individuals.

Public awareness, combined with local regulations and testing and monitoring implementation, are the only attributes likely to result in an acceptable lead-control program. Because the community water supplier has been at legal risk in making consumers aware of corrosion problems, there is tremendous dis-incentive to implement and pursue a rigorous and "regular point-of-use monitoring program." The legal liability must be shifted first, and the problems brought to public awareness for local action.

We note that in the EPA's publication "Drinking Water & Health," volume 4, p. 17, the following statement: "In considering the reliability of a distribution system, it would seem appropriate to point out that water purveyors are legally responsible if any illness or death results from a system defect." To make a community water supplier responsible, say, for a child's mental retardation resulting from lead corrosion of pipes inside a new apartment building, and then asking that supplier to establish where else in the distribution system similar defects might exist, is asking for self-destruction. It seems, at best, destined for routine and unannounced failure.

Recently, in several areas of public health and environmental impairment, insurance companies have terminated (or made prohibitively expensive) appropriate liability coverage. Despite the benefits to 99% of all vaccinated children, pharmaceutical suppliers are bowing out of production of several children's vacci-

nation products, due to the liability associated with the mortality of a very few. In this case, Congress is taking direct action to limit pharmaceutical liability. Similarly, environmental impairment liability coverage is virtually impossible to obtain, due to the enormous potential exposure of the insured and the carrier.

To place community water systems in a position such that they are open to extraordinary liabilities, and then ask them to further expose themselves by investigating the precise outlines of those liabilities, is both short-sighted and unrealistic. We are only making certain that the issues will be avoided, with a continuation of substantial costs to the general public.

I very much hope that you will find these comments of value. Our company and I stand ready to assist in any way in bringing to full fruition one of the most important pieces of public health and environmental legislation ever crafted by Congress.

Sincerely,

Eugene A. Rosow, Pres.
Water Test Corp.

WWEMA

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TESTIMONY OF

THE WATER AND WASTEWATER EQUIPMENT MANUFACTURERS ASSOCIATION, INC.

ON AMENDMENTS TO THE

SAFE DRINKING WATER ACT

BEFORE THE SENATE SUBCOMMITTEE

ON TOXIC SUBSTANCES AND ENVIRONMENTAL OVERSIGHT

March 21, 1985

Mr. Chairman and Members of the Subcommittee, I am Robert Emrie, President of Enviroquip, Inc., and a member of the Water and Wastewater Equipment Manufacturers Association, Inc. (WWEMA).

WWEMA is a 77-year old organization of over 120 corporations that develop technology for and manufacture and supply equipment, materials and services to the water supply and water pollution control industries. Our plants, in nearly all 50 states, employ some 50,000 people.

WWEMA welcomes this opportunity to again participate in the process of amending the Safe Drinking Water Act through commenting on proposals contained in your bill, S.124, the Safe Drinking Water Act Amendments of 1985. We believe that early attention to these proposals will ensure passage of amendments that, while not necessarily fulfilling the desires of all involved, will at least allow the water supply industry to achieve timely, real and reasonable progress towards improving the quality and availability of water for human consumption.

As we testified at hearings held by your subcommittee in the 98th Congress, WWEMA would prefer that implementation of the SDWA undergo mid-course corrections aimed at increasing promulgation of health-based water quality standards and promoting across-the-board compliance by all water supply systems in the United States. The industry should continue to develop methods of compliance, innovative technology and required training and education programs.

WWEMA offers these comments and suggestions in a spirit of cooperation and with an eye towards achieving a consensus among the various organizations concerned about maintaining, and where necessary improving, the high quality of water for

which this nation is known. Our primary interest is in assuring promulgation of and compliance with health-based water quality standards that will protect the public health. (Our comments relate directly to your proposals in S.124.)

NATIONAL PRIMARY DRINKING WATER REGULATIONS -- S.124 proposes simultaneous promulgation of maximum contaminant level goals and national primary drinking water regulations for 14 volatile organic chemicals and for contaminants listed in the October 5, 1983 Federal Register advance notice of proposed rulemaking; the bill also sets deadlines for promulgation of NPDWRs. WWEMA wholeheartedly supports these requirements.

We further urge you to take steps to require uniform application of MCL goals and NPDWRs to all water systems in the country. There is simply no reason to provide more protection to residents of populous areas or to allow potentially unsafe water to be provided to travelers or residents relying on very small systems. While certain systems may merit special consideration, these situations are better addressed through the variance and exemption processes.

Good treatment practices should include filtration and disinfection. Thus, we believe that the proposed legislative requirement for these treatment practices will serve to ensure that all systems, rather than just those with sufficient knowledge and funding, will implement these simple yet necessary treatment techniques.

However, WWEMA finds itself unable to give that same wholehearted support to legislating a specific treatment technique. While we recognize, and support, the concern behind your specifying use of granular activated carbon as a feasible

treatment tecnnique in the bill, we fear that legislating a specific treatment technique will encourage research to close the door on developing other techniques that may be even more effective in controlling synthetic organic chemical contamination. We believe that the language WWEMA proposes will both ensure continued protection of the public and encourage use of innovative technologies. WWEMA proposes that the following language be substituted for that in §(b)(4):

> For the purpose of paragraph (2), any technology, treatment technique or other means is available (taking costs into consideration) for the control of synthetic organic chemicals provided it is at least as effective in controlling synthetic organic chemicals as the current use of granular activated carbon.

Nor can WWEMA unreservedly support promulgation of specific treatment techniques. S.124 would allow EPA to require specific treatment techniques if the Agency finds it economically or technologically infeasible to determine a contaminant level. This provision gives EPA too much leeway; we can envision situations in which the Agency must promulgate an MCL by a date certain but finds itself short of resources to conduct the necessary research to determine the contaminant level. The easy way out would be for the Agency to specify treatment techniques rather than proceed apace with the research.

WWEMA prefers that decisions concerning the type of treatment technology to be used be left to the expertise of professionals in the water supply field. These experts can rely on existing knowledge to meet water quality goals in the most cost-effective way and will continue to push for advances in the state-of-the-art through innovative technologies. EPA can then devote its arguably limited resources to developing appropriate water quality standards to adequately protect human health.

One final comment on NPDWRs -- S.124 requires standards for contaminants "which may have any adverse effect on the health of persons." An amendment has been proposed that would require standards for contaminants "for which there is a rational basis to believe that there may be any adverse effect on the health of persons." Although WWEMA did not take an active role in the discussion about the basis for standard-setting during previous hearings on the SDWA, we did follow the arguments closely. We believe that much of the difficulty with the "rational basis" language might be avoided if you would consider this substitution: standards should be set for contaminants

> for which a preponderance of the evidence indicates potential adverse effects on the health of persons, where preponderance of the evidence includes but is not limited to consideration of available health studies, technological data and lists of contaminants regulated under other health-based statutes.
>
> If the Administrator determines that a preponderance of the evidence does not support a finding of potential adverse effects on the health of persons, the Administrator must publish in the Federal Register a negative determination stating the reasons for his decision.

MONITORING FOR UNREGULATED CONTAMINANTS -- WWEMA has long supported establishment of a program of continuous monitoring of surface and groundwaters to provide a reliable data base. We commend you for taking the first steps in this direction by mandating a monitoring program for unregulated contaminants.

We would like to see the monitoring program extended to all water supply systems and to all contaminants. While public water systems are required to monitor under current regulations, many of the smaller systems fail to do so on a regular basis. WWEMA urges Congress and EPA to take steps to ensure that all water systems conduct necessary monitoring and that data derived from such a monitoring program is made available to anyone interested.

OTHER PROVISIONS

Our comments have been addressed to issues of particular concern to WWEMA's constituency. While we do not generally comment on issues that have little or no effect on equipment manufacturers, WWEMA would like to take this opportunity to comment briefly on and express our support for several provisions of S.124:

ENFORCEMENT -- WWEMA is pleased by the strengthened enforcement provisions in the bill. Use of administrative orders will provide EPA needed flexibility in implementing and enforcing provisions of the SDWA while not placing the Agency on the horns of the dilemma of choosing between an often lengthy court process and allowing violations of the Act to continue.

VARIANCES -- Requiring implementation of best available technology, treatment techniques or other means available prior to granting a variance will prevent indiscriminate granting of variances. Preparing compliance schedules prior to issuance of a variance will force water systems to make strides towards compliance with the standard.

EXEMPTIONS -- Tightening requirements for issuance of an exemption will, WWEMA believes, make water systems less willing to seek an exemption. The proposed one-year compliance deadlines should encourage use of innovative technologies as well as increase exchanges of technological data and research into new control methods.

DELIBERATE CONTAMINATION -- WWEMA supports making tampering with a public water supply subject to criminal penalties. Any deterrent to potential harm to public

health is a plus; we see this provision as a necessary step in assuring continued high quality water.

VENUE -- WWEMA opposes the proposed amendment to S.124 that would place venue in the jurisdiction in which the violation occurs. We believe this provision is unnecessary and will lead to increased litigation as courts seek to resolve differing interpretations of the law.

While generally supporting the provisions of S.124, WWEMA believes the bill does not address certain problems facing the water supply industry. The National Drinking Water Advisory Council, relied on by EPA in addressing issues under the SDWA, is lacking a representative from the manufacturing segment of the water supply industry. This void results in a bias on the Council, since without the input of a member closely involved with development of new equipment the Council cannot provide the Agency complete information on the availability and effectiveness of proposed or innovative technologies.

We urge you to rectify this oversight **by instructing EPA to give full consideration to appointing NDWAC members that are representative of all sectors of the water hygiene and public water supply fields**, including those who manufacture the equipment relied upon by water systems to meet the requirements imposed by regulation and legislation.

The proposals for more standards and increased monitoring contained in S.124 will not be accomplished without increased costs to the utilities that must implement these requirements. The funds to support production of potable drinking water and across-the-board monitoring for unregulated (and regulated) contaminants must

come not from federal outlays but from the public that will be protected. That there will be no federal support for compliance with requirements of the Safe Drinking Water Act must be made clear at the outset.

Financing the necessary contaminant removal processes as well as other aspects of producing potable water is the responsibility of the water utilities, supported by the appropriate state and local agencies. Water rates should be sufficient to cover existing costs as well as provide additional revenues for new federal programs. Adequate water rates would achieve both objectives while allowing the utility to equitably allocate costs of water treatment among consumers. Such action is nothing more or less than good management practice, implemented by any successful business.

WWEMA urges you to clearly state that **it is the responsibility of the appropriate water agency to finance production of safe, clean drinking water.** The local drinking water utility must take whatever actions are needed to produce high quality potable water, including increasing water rates to a level that will provide the necessary funds to implement the requirements of the existing SDWA as well as the revisions to the Act contained in S.124.

It is essential to remember that water costs cannot be equitably allocated without some method of measuring consumption. Residential, commercial and industrial water use must be accurately measured before a share of the costs of water treatment can be apportioned. Installation of water meters on individual homes and offices should be mandated so that it becomes as common a practice as metering industrial use.

In the past year, increased recognition has been given to the need for better management of our water resources; this recognition goes hand in hand with a realization that there is not a lack of water in the nation but a lack of good management. We urge you to consider the following first steps toward improving management of water resources in the country:

1. Require installation of water meters on all residences in cities such as New York City and Denver to encourage awareness of the use of water by the consuming public.

2. Encourage efforts to upgrade and repair older water distribution systems to reduce unaccounted for water loss.

3. Establish a national water bank, based perhaps on the state bank implemented in New Jersey, to loan money to water utilities for repair, rehabilitation and other needed improvements.

WWEMA believes that with Congress, EPA, the industry and public interest organizations working together, we will be able to satisfy the future needs of the nation, with continually improving water quality available at a price that is consistent with the benefits. Thank you for your attention to our comments and suggestions. WWEMA would like to request the opportunity to provide additional information for the record on several issues addressed in S.124. I would be pleased to answer any questions you might have.

TESTIMONY OF THE
AMERICAN WATER WORKS ASSOCIATION
BEFORE THE
SUBCOMMITTEE ON TOXIC SUBSTANCES
AND ENVIRONMENTAL OVERSIGHT
SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
REGARDING
SAFE DRINKING WATER ACT AMENDMENTS OF 1985
MARCH 21, 1985

Mr. Chairman, the American Water Works Association welcomes the opportunity to appear before you today to express our views on the Safe Drinking Water Act amendments of 1985. I am Frederick H. Elwell, Director of the Manchester (NH) Water Works, and Chairman of the Association's Water Utility Council. I am also a registered professional engineer with over 17 years in the water supply field, and a member of the National Drinking Water Advisory Council.

Mr. Chairman, AWWA is a 104-year-old, non-profit, scientific and educational society, and the largest organization of professional water supply people in the world. Our membership includes over 3,000 water utilities that provide approximately 70% of this Nation's potable water. Our members hold, as a common goal, the provision of the best possible water to consumers at a reasonable cost. We assure you that as providers of a precious and vital resource that sustains human life, we believe in the substance of the SDWA and strongly support your involvement in attempting to improve the Act by introducing the 1985 amendments.

Small Systems

AWWA believes that most of the revisions proposed by S 124 will improve the quality of this Nation's drinking water. Still not adequately addressed in this legislation, however, are small water supply systems.

There are approximately 40,000 water supply systems in this country with 500 or fewer customers each. A 1982 General Accounting Office study noted that the majority of violations of existing drinking water quality standards occur in these small systems. Small systems are hampered by lack of adequate technical expertise, constraints on available funding, and difficulties in obtaining alternative supplies of raw water when necessary. If the 1985 amendments are to address the overall problem of drinking water supply in this country, the issue of small systems must be dealt with.

AWWA urges the Subcommittee to give consideration to establishing requirements for minimum financial and technical capability as a prerequisite to entry into the public water supply business. Minimum qualifications would create a much greater incentive to make arrangements for inclusion in a regional system. This approach would eliminate the later problems primacy agencies encounter when it becomes obvious that a small system can neither afford to install, nor develop the technical expertise necessary to properly operate, a treatment technology to provide safe drinking water.

The technical assistance provisions of S 124 can be of value to small systems if they do not offset existing programs of this nature sponsored by the Environmental Protection Agency.

Timetables for Standard-Setting

The proposed amendments would require EPA to regulate specific contaminants within specific time periods. AWWA feels that this is achievable but would caution that excessive use of such timetables in the law can cause decision-making based on sound scientific knowledge to be sacrificed for the sake of speed.

Priority List of Contaminants

Based on the extent of occurrence and health effects, under S 124, EPA would be required to publish a list that establishes priorities for review of substances which may have any adverse effect on the health of persons. We feel this a good strategy and support it.

Establish A Single MCL Number

The proposed amendments to the Act continue the process of establishing RMCLs and MCLs. While the semantic change from "RMCL" to "MCL goal" may reduce the public mystique, the rationale for having two numbers, i.e. a goal and a standard, escapes us. Simultaneous promulgation of MCL goals and MCLs will undoubtedly reduce the current time-consuming process, however, that process can be significantly clarified by deleting the requirement for MCL goals and integrating the process used to develop such goals with the MCL process, to develop one number as the standard for controlling contaminants in drinking water.

Best Available Technology vs. Generally Available Technology

As the principal supplier of drinking water in this nation, the members of AWWA strongly support all reasonable efforts to improve drinking water quality. In this regard, the Association believes that maximum contaminant levels should be based on health effects and available technology. To do otherwise is a disincentive to the continuing need to develop scientifically-based standards.

The Association recognizes the difficulty and time-consuming process of developing scientifically-based standards. Accordingly, until such standards can be developed and to help assure continued progress in improving the nation's drinking water, the Association will support field tested "best available technology" as the new basis for standard-setting. AWWA urges the Subcommittee, however, to consider the reality that best available technology must not only be "best" but also "available"; i.e. available on a scale and at a level of reliability that can be employed by the drinking water industry on a cost-effective basis to avoid unrealistic cost to the consumer.

Effective Treatment Processes

While the Association understands the intent of listing granular activated carbon as an available technology, AWWA feels compelled to reiterate that we are opposed to

listing any specific treatment process in legislation. While we concur with the intent of listing specific technologies, the result could be counter-productive. The law should address the results desired and leave the selection and application of technology to the scientific and professional community abetted by the free enterprise system.

Listing a specific treatment technique may result in a perception of it being the only or best treatment process to be considered. The Association believes that in the real world, such listing will become a disincentive to development of innovative and equally effective treatment techniques. In addition, as science expands, the list of effective treatment processes changes. If necessary, these changes are more easily accommodated through the administrative process of regulation than by amending legislation.

Air stripping is effective for removing the lighter, more volatile synthetic organic compounds occasionally found in groundwater, while GAC is effective for removal of the heavier synthetic organic contaminants found in surface waters. If the Committee chooses to retain the listing of GAC, we urge that the amending bill be revised to provide that the best available technology feasible for the control of synthetic organic chemicals include the use of adsorption techniques, such as GAC, or air stripping or other comparably effective techniques.

Required Use of Treatment Techniques

S 124 authorizes the Administrator to promulgate national drinking water regulations requiring the use of a treatment technique in lieu of establishing maximum contaminant levels if it is not economically or technologically feasible to ascertain the level of the contaminant. Because of the site-specific nature of many contaminants and the local expertise that is available, AWWA recommends that the bill authorize a community water supplier 90 days to file an appeal from such an EPA decision. The appeal would be based on evidence that the treatment technology would not be effective under local conditions, the specific contaminant is not present, alternative technology is available and feasible, or the primacy agency has put in place an alternative strategy for dealing with the contaminant.

Filtration and Disinfection

AWWA has long supported filtration and disinfection as treatment techniques where necessary to assure drinking water quality. Because there are some circumstances where filtration and disinfection are not necessary, however, it is not appropriate to uniformly specify these particular techniques in the statute. This logic also applies to specifying a particular technique in the statute to address any other water quality concern. S 124 provides an intelligent and reasonable approach to this issue by requiring states to identify, through application of criteria established by EPA, those systems which must implement a specific process such as filtration in order to provide safe drinking water.

Science Advisory Board

As previously stated, the Association believes that drinking water standards should be established as they are with other foods consumed by humans -- that is, on sound science. In regards to the latter, the involvement of the National Academy of Sciences

is eliminated in S 124 and the Science Advisory Board (SAB), is given merely "an opportunity to comment" on proposed regulations. Everyone here today would agree that lack of adequate health effects data is one of the most serious problems confronting us. Any step that tends to divorce science from the issue of safe drinking water is, in our opinion, a mistake. We urge the Subcommittee to revise the language of the current bill so that the SAB is required to comment on the scientific merits of any proposed drinking water regulation. Language should also include a specified period of time for SAB to comment in order to avoid delay in promulgation of regulations. The Board should also have a major role in the process of setting priorities for development of MCLs.

Administrative Orders

S 124 would require EPA to issue an administrative order if, after 30 days notice from EPA, the primacy state has not commenced appropriate enforcement action. AWWA believes that this provision will damage the Federal/State partnership which forms the foundation of the Safe Drinking Water Act. In primacy states, an approach whereby EPA is denied flexibility and must take enforcement action, destroys the credibility of the state agency in dealing with utilities. States are the key to effective administration of the Safe Drinking Water Act and have been delegated responsiblity to assure safe water. Therefore, the Federal/State partnership would be better served by granting EPA discretionary, rather than mandatory, autnority to issue administrative orders.

Public Notification

We are also pleased to see that the provisions for public notification have been modified to provide the Administrator needed flexibility to address health-related violations as distinguished from administrative violations.

Variances

Under the proposed amendments to the Act, a variance would only be issued after a system applies the best available technology, specified by EPA. EPA's determination would be based on cost, population served, physical conditions and engineering feasibility. The language appears to recognize that while application of best available technology may not allow a utility to meet an MCL, it will nevertheless reduce the concentration of the particular contaminant. An exception to this requirement may be appropriate in those instances where installing best available technology still would not allow the supplier to meet a standard. In situations of this nature, an alternative source of water should be developed which would permit the utility to meet the standard.

Monitoring

We strongly endorse the requirement for monitoring since it is a necessary first step in any effort to deal with contaminants which pose a potential threat to human health. The Association concurs that the results of such monitoring should be available to the public. Many of our members now provide this information as a customer service. However, without better health effects research results, the usefulness of this information is questionable, unless the public can directly relate this to the effect on their health.

The 1985 amendments authorize $30 million to be appropriated in FY 86, and to remain available until expended, to carry out the monitoring provisions for small systems. The Association would recommend that the Subcommittee consider expressly stating in the law that this money is available to the states to carry out this monitoring.

Intentional Contamination

We are especially pleased to see that the bill includes criminal sanctions for contaminating or attempting to contaminate a public drinking water supply. Such sanctions are a needed tool for dealing with incidents such as the threats of cyanide contamination to several Louisiana water supplies.

Underground Injection Control

AWWA supports strengthening the underground injection control provisions of the SDWA. As pointed out in our previous testimony, however, we believe that the requirement for a 1/4 mile separation between drinking water sources and hazardous waste injection wells does not ensure adequate protection. Primacy agencies should dictate separation distances and other controls based on considerations which include hydrology and a number of other site-specific factors.

The Association recommends the following language to address the technical aspects of aquifer systems:

"Section 1426. (a) no hazardous waste may be disposed of by underground injection--

(1) into a formation or aquifer system which is hydraulically connected to an underground source of drinking water; or

(2) above such a formation or aquifer system."

Groundwater Protection

S 124 proposes a number of actions which would afford greater protection to our precious underground sources of water. AWWA supports all such measures to protect aquifers that are or may reasonably be expected to become sources of drinking water. It is noted, however, that inclusion of groundwater protection in the Safe Drinking Water Act amendments, a health bill, has apparently delayed enactment of amendments that this Association feels are vital to the improvement of drinking water quality. Accordingly, and solely in the interest of enacting amendments to the Safe Drinking Water Act and expeditiously promulgating standards, this Association would support deletion of groundwater protection measures from the Safe Drinking Water Act and addressing this critical problem in separate legislation.

Promulgation of National Standards

The Association strongly supports the expeditious development and promulgation of national standards for those contaminants that are found in our water supplies. In this regard, we feel that the "rational basis" language contained in the proposed amendment

to S 124 lacks definition and establishment of numerical standards will be delayed until the courts define this term. More importantly perhaps, this language, in addition to the "may have any adverse effect" provision, appears to leave the Agency no choice except to regulate all contaminants and further weakens the need for health effects research. We urge, in the strongest terms, that this amendment not be adopted.

Summary

In addition, AWWA urges you, Senator Durenberger and the other members of the Subcommittee, to use your good offices on two other aspects of the drinking water problem. The first of these is a major effort to increase funding for needed health effects research. We urge that language be added to the Safe Drinking Water Act that would encourage community water suppliers to add a modest amount to their rates and dedicate the revenue generated by this assessment to national industry-sponsored research. The second is to vigorously pursue better source control of both point and non-point source discharges. While far from simple, it is clearly most desirable to limit introduction of contaminants at the source rather than deal with them in exceedingly small concentrations at the drinking water intake.

It is also important for you and your Committee to understand, Senator, that in addition to addressing this legislation, AWWA has been diligently working with EPA to develop regulations that promote public health, safety and welfare through improving the quality and quantity of water delivered to the public and to increasing the understanding of the problems relating thereto. The Association believes that regulations evolving from legislation should be based on state-of-the-art science and technology; reasonably be expected to reduce unacceptable risk to health; be practical and feasible to implement; be consistent with other federal legislation/regulations governing risks inherent in the public's exposure to health hazards; and have a positive effect on the quality of water delivered to the public by the industry.

In closing, AWWA commends the Subcommittee on its efforts on the complex problem of assuring adequate supplies of high quality drinking water. With the few changes we propose, we, the suppliers of drinking water for America, will support the pending legislation. The public will benefit and we can do our job of providing quality, safe drinking water for the country at reasonable cost.

We appreciate the opportunity to appear here today and will be pleased to answer any questions.

Water Utility Council
American Water Works Association

April 10, 1985

Honorable Dave Durenberger
Chairman, Subcommittee on Toxic
Substances & Environmental Oversight
United States Senate
Washington, D.C. 20510

Dear Senator Durenberger:

Thank you for your letter of April 3, 1985 regarding the American Water Works Association's (AWWA) testimony before your Subcommittee on the Safe Drinking Water Act Amendments of 1985, S 124. The enclosed is forwarded in response to your request for additional information.

On behalf of the Association, I would like to express appreciation for your, and the Subcommittee staff's, efforts to resolve the complex problem of assuring high quality drinking water for the public. Better water for people is a goal that AWWA supports internationally. We look forward to working with you in furtherance of this objective.

If there are additional points which I can clarify or if the AWWA can be of further assistance, please do not hesitate to contact me or the Association's representative in Washington, D.C., Mr. James Groff at (202) 628-8303.

Sincerely,

Frederick H. Elwell

Frederick H. Elwell
Chairman, Water Utility Council, AWWA
Director, Manchester Water Works

FHE/JBG/gw
Enclosure

"In your statement, you urge Congressional encouragement for industry-based consumer financed research on contaminant health effects. I'm interested in the concept of industry-based research at a time when the need for better information is great and federal dollars are short. However, it seems to me that a more appropriate area for industry involvement would be that of technology research and innovation, rather than health effects which serve as a basis for regulation.

Could you comment on this and whether the American Water Works Association Research Foundation has an official position on the type of industry research that should be undertaken?"

RESPONSE

The intent of AWWA's testimony and my comments were to recommend to the Subcommittee that EPA's health effects research effort be increased to the maximum extent feasible.

Because of its cost and public policy implications, public health effects research is a function best left to the Federal Government. While we recognize that health effects research programs are spread among several Federal agencies, we feel that EPA's program, specifically directed at drinking water, should be strengthen to attempt to provide more definitive answers regarding the significance of water supply contaminants on public health.

The role of the American Water Works Association's Research Foundation in the standard-setting process is not, we believe, in health effects research, but rather in providing our experience in other areas of the decision-making process. The industry's strengths are associated with operations of water supply systems, economics of supply and delivery, and design compatibility and reliability. We intend to advance our understanding of these areas through the Foundation's research effort, which should be conducted in partnership with EPA. In addition, however, the industry has research needs that go far beyond the matters covered by regulations.

It has never been the Association's or the Foundation's intention to create a research program that would be in direct competition with EPA. Our past, current and future research program has been designed to avoid costly duplication; not only with EPA, but with other research organizations as well. Our priority will continue to be an operational/applied research program directed at the practical problems facing the industry.

In this regard, the Foundation is currently investigating a long-range funding program to support comprehensive industry research to ensure that water technology keeps pace with state-of-the-art advances, and thereby continue to provide the public with the highest possible quality of drinking water. The funding for this program would be by means of a research assessment added into the base water rates of all but the smallest water utilities in North America. It is being considered as an internally-generated and applied program that would be an undertaking and responsibility of the water utility industry, without Federal involvement. Any encouragement for this approach which the Congress could provide, perhaps by a resolution endorsing it, would be greatly appreciated. In the meantime, I will be pleased to keep you informed of its progress.

"I'm interested in your statement that the specific reference to granular activated carbon (GAC) might negatively affect technological innovation. I was at a meeting last year where water suppliers were asked to describe their systems' treatment and the age of their system. There was virtually no difference between what most were doing now as compared to 50 years ago. That's when I decided innovation was not running away with this industry."

RESPONSE

Mr. Chairman, I feel that perhaps a comparison would be useful. In the early 1900s, Henry Ford produced a vehicle that was destined to make the automobile affordable to all. It consisted of several basic components; an engine, drive train, steering, wheels, etc. Through the years, the automobile has undergone a number of innovations, all designed to increase safety, efficiency and comfort, and reduce cost and pollution.

In a similar vein, the water industry has a basic treatment process; essentially consisting of addition of chemicals, coagulation, settling, filtration, and disinfection. This process, frequently referred to as conventional treatment, is not uniform throughout the country since it is extremely dependent upon the site-specific characteristics of the source water. Just like the automobile, however, there have been a number of innovations that have been applied to the basic treatment process to increase efficiency, meet higher standards and reduce manpower. These include, inter alia:

- addition of polymers and other chemicals to assist the settling process;
- high rate filtration;
- direct filtration (i.e. no pre-treatment with chemicals);
- revising chemical application points;
- using a variety of disinfection techniques, such as chlorine dioxide, ozone, peroxide, chloramines, etc.;
- dual and mixed media filters (to reduce backwash frequencies and increase filter runs);
- mechanical sludge disposal;
- Lamella plate settlers in settling basins;
- computers to control flows, chemical additions, backwash, etc.;
- GAC for reduction of taste and odor;
- aeration to reduce volatile organic chemicals; and
- automatic monitoring of water quality.

The aforementioned suggests that there is an analogy to be drawn between the automobile and the drinking water industry. Both have applied innovation and new technologies to the basic "drive train" to provide, in the former, better transportation, and, in the latter, better drinking water for the public.

What we are suggesting is simply that the drinking water industry wants standards. Those standards, however, should not be tied to a single technology because there is no single technology that can be applied to all contaminants. Avoiding, for the moment, the question of how standards should be established, it is our position that it is inappropriate to use GAC in any reference to a standard because of the essentially infinite variability in removal efficiency possible, depending on the contaminant involved and site-specific source water characteristics.

As pointed out in our testimony, AWWA is opposed to legislating any treatment process. Mandating treatment processes should be left to the administrative regulatory process, where there is greater opportunity to carefully evaluate the advantages and disadvantages of a specific technology when applied to a specific contaminant.

"Mr. Elwell, I know that you operate a system with GAC in Manchester, New Hampshire.

What was the objective in installing this technology at your system?"

RESPONSE

Mr. Chairman, the objective in installing GAC in Manchester was to control taste and odor caused by naturally occurring algae. Since Manchester enjoys a highly protected watershed, its source waters are generally free of synthetic organic pollution. The GAC treatment does, as an additional benefit, provide incidental removal of non-point source contaminants, such as oil, gasoline, etc., associated with runoff from roads. This system should also prove useful in responding to a spill from a vehicle accident, however, the potential for these incidents did not drive the installation of GAC in Manchester.

"What levels of removal of organic chemicals are your achieving with this technology?"

RESPONSE

The attached graphs show percent removal as a function of operating time achieved for instantaneous trihalomethane (ITHM), total organic carbon (TOC), and trihalomethane formation potential (THMFP). It must be emphasized that Manchester has a protected watershed and, thus, its source water quality is comparatively high with respect to synthetic organic chemicals. For systems with unprotected watersheds, the removal efficiencies could be expected to decline much more rapidly with time, thus necessitating GAC regeneration as often as 30 days or less.

While larger systems may be able to handle the operating and maintenance costs inherent in more frequent regeneration, these increased costs could cause a severe strain on the resources of medium and smaller systems with less protected source supplies.

We would be happy to provide your staff with the complete report from which the attached materials were extracted, if you desire.

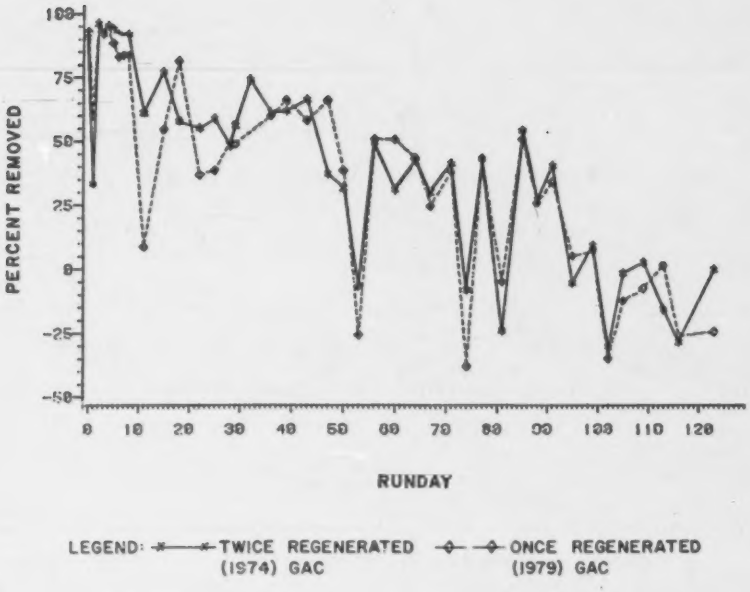

Figure 60. Run 2.— Test filter percent removals for ITHM.

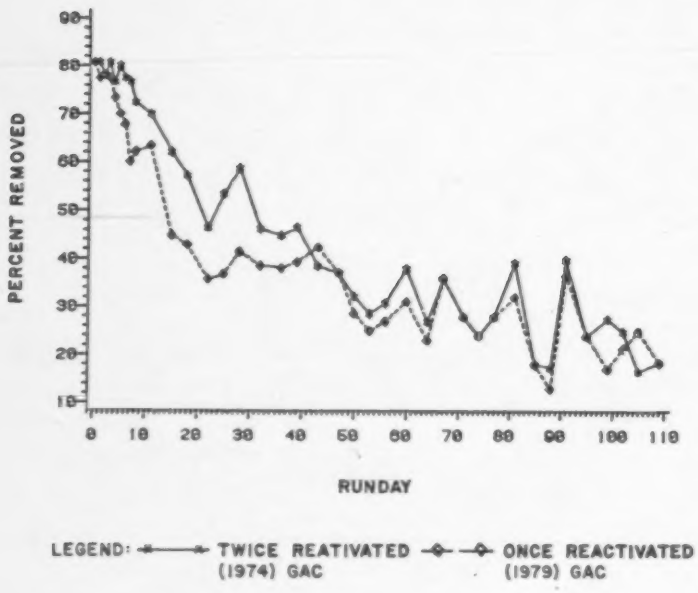

Figure 71. Run 2.—Test filter percent removals for TOC.

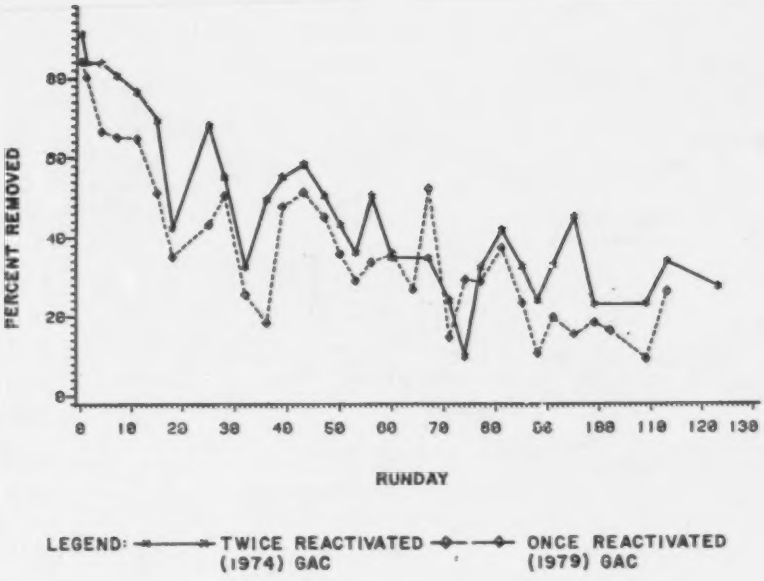

Figure 82. Run 2.—Test filter percent removals for three day 28.5°C THMFP.

"How many of the other members of AWWA are currently using GAC? For what general purposes?"

RESPONSE

In 1981, the Association conducted a survey of its 3,000 utility members. At that time, 27 utilities, or approximately 2% of the 1,397 utilities that responded, indicated that they were using GAC.

To the best of our knowledge, the 27 plants were using GAC to reduce the concentration of those organics which cause taste and odors. These plants, however, do have the ability to reduce the concentration of some synthetic organic chemicals despite the fact that the plants were not specifically designed with this purpose in mind.

The first major GAC installation intended specifically to reduce the concentration of a broad range of synthetic organic chemicals is now under design. It should be noted, however, that the plant is not being designed to remove either volatile organic chemicals (VOCs) or trihalomethanes (THMs). Regardless, if VOCs and THMs are in the influent, some reduction in the finished water can be anticipated as a result of the action of the GAC.

The American Water Works Association is now in the process of surveying approximately 550 of the largest drinking water utilities in the United States for purposes of developing an extensive, computerized data bank of information concerning the industry. Several of the questions posed to these utilities address the use of GAC. Accordingly, the Association should be in a position to better respond to this question in the future.

"How could GAC, used as a performance benchmark, hinder the development of new technology when most of the water supply industry seems to still regard GAC as innovative technology?"

RESPONSE

Mr. Chairman, as stated in our testimony, the drinking water industry strongly endorses the expeditious promulgation of standards for contaminants found in drinking water supplies. However, we urge that such standards be based on health effects as determined by sound science, taking into consideration available technology. The Association recognizes the difficulty inherent in the time consuming process of developing scientifically-based standards and, as previously stated, would support field-tested "best available technology" as a basis for standard-setting in situations where scientific knowledge is inadequate to fix a health-based standard. The question then becomes whether GAC is the "best available technology". The problem, simply stated, is that in some instances, it is, and in others, it is not.

In theory, while use of GAC can provide some reduction in concentration of most synthetic organic chemicals in drinking water supplies, there is still a great deal to be learned about the surface chemistry of activated carbon. The effectiveness of activated carbon as a treatment technique appears to vary greatly from contaminant to contami-

nant and from source water to source water. From the standpoint of practical application, GAC is not the preferred method for reduction in the concentration of VOCs or THMs.

As the USEPA has noted (47 Fed. Reg. 9798, Mar. 5, 1982),

> "EPA believes further that these methods [GAC in either the filter replacement or post-filter contactor mode and biologically activated carbon] would consistently achieve substantial reduction of TTHMs only with frequent regeneration at accompanying high costs or, if used without frequent regeneration, would not be consistently effective for TTHM control."

More importantly, Mr. Chairman, it is not clear by our reading of the language in S 124 that GAC is to be used simply as a "performance benchmark", rather than a mandated technology. In any event, the Association feels that it is particularly undesirable to define a performance "benchmark" in relation to one particular treatment process. We believe that such an approach would tend to stifle development of new, innovative and more economical treatment technologies. With any "benchmark" technology explicitly mentioned in the statute, and with the burden of proving the equivalence of an alternative placed on the regulated community, it is unlikely that an individual drinking water supplier would have the resources available to convince EPA of the desirability of employing an alternative technology. If, however, the Subcommittee continues to believe that it is necessary to specify GAC as a performance benchmark in the statute itself, we would like to work with you to develop language to make this point explicit.

Testimony of

Jacqueline M. Warren

on behalf of

Natural Resources Defense Council

and

Environmental Policy Institute

before the

Senate Committee on Environment and Public Works

on

Reauthorization of the Safe Drinking Water Act

March 21, 1985

Introduction

This testimony is presented on behalf of the Natural Resources Defense Council and the Environmental Policy Institute, two major national environmental organizations working to strengthen the Safe Drinking Water Act (SDWA) and to enhance protection of the nation's groundwater resources. We strongly support enactment this year of amendments to remedy the shortcomings in the federal drinking water law and in federal protection of groundwater that were identified by both the House and Senate during the last Congress. Toward this end, we welcomed the early introduction and bipartisan co-sponsorship of S.124.

The problem of contaminated drinking water continues to grow, and measures to protect consumers against the health risks posed by toxic contaminants in drinking water are more urgently needed than ever. Although steps in this direction have been taken under other federal laws, stringent measures to require standard-setting, to monitor the quality of our drinking water supplies, and to prevent further contamination of groundwater through underground injection and uncontrolled surface activities in critical aquifer recharge areas, are still wanting. Such protective measures should properly be enacted through amendments to the Safe Drinking Water Act, and we commend the Committee for considering them at this time.

In general, we believe S.124 is a good bill. It addresses many of the problems that have impeded establishment and

implementation of a comprehensive federal drinking water program. These include standard-setting, monitoring for unregulated contaminants, timely public notification of noncompliance with standards, additional controls on underground injection of hazardous substances, and enhanced protection of sole source aquifers and critical aquifer recharge areas.

There are specific aspects in which we believe S.124 should be strengthened, however, to achieve more effectively the improvements in current law that we all seek. These are set forth below with suggested changes and additions to the bill.

1. Goals

There is a pressing need for the articulation of national goals to assure safe drinking water to the whole population and to protect underground sources of drinking water aginst further degradation. In the absence of such overriding goals, decisions regarding the adequacy and applicability of drinking water standards, and the potential long-term significance for groundwater of activities for which approvals must be given today, are being made in a short-sighted, ad hoc and often inconsistent manner. A declaration of goals can assist decision-makers in resolving difficult policy issues where consequences may be irreversible but potential impacts anticipated only many generations in the future.

Such a declaration of goals should be added at the beginning of S.124 to the effect that:

> (a) It is the national goal that all public water systems provide drinking water free of any contamination that may

have any adverse effect on the health of persons.

(b) It is the national goal that all underground sources of drinking water be protected from any contamination that may have any adverse effect on the health of persons.

2. Expanded Standard-Setting Requirements

(a) Shorten the schedules for standard-setting

Since at least a year will have passed between the first proposal to require expedited standard-setting for volatile organics and other contaminants in drinking water and enactment of S.124, we recommend that the time frames for the first two lists to be required by §1412(b) be shortened to 6 months and 24 months, respectively. EPA has had ample time to proceed with the standard-setting process since the two lists were published in 1982 and 1983. It should not be necessary to provide substantial additional time for the Agency to complete the task they have presumably been diligently engaged in for the past two and one-half years.

We further propose that a period of 12 months be specified for promulgation of MCLs and MCL goals after proposal. Under current law, public water suppliers have a minimum of 18 months after promulgation of an MCL to achieve compliance. Thus, the "expedited" schedule established by the proposed amendments is quite lengthy. Given EPA's estimate that rulemaking takes approximately two years from proposal to promulgation, the improvements in existing drinking water quality sought by this legislation will not be obtained before a minimum of 5 years after enactment for the first list, and 6 1/2 years after

enactment for the second list. For this reason, we have proposed changes in the schedule that would reduce the time to 3 years and 4 1/2 years after enactment, respectively. We also urge that Science Advisory Board review as proposed in §1412(e) be required to be completed within the statutory time limits in order to prevent any additional delay as a result of such review.

(b) Eliminate the provision for deletion of contaminants from the specified lists

In order to defuse the controversy over language that impeded passage of Safe Drinking Water Act amendments last year, we also propose that language describing a rationale for not promulgating MCLs and MCL goals for listed compounds be deleted from the bill. The compounds contained on the lists published by EPA are both toxic and either found or likely to be found in drinking water supplies. Accordingly, the Committee should simply direct EPA to develop drinking water standards for those compounds according to a defined schedule. Such an approach is being implemented by New Jersey and other states, and has been successful under other federal laws.

(c) Delete explicit consideration of costs in establishing MCLs

Both current law and S.124 direct EPA to establish MCLs as close to the health-based MCL goal "as is feasible." The statutory definition of "feasible", however, departs from the standard English usage, which means "capable of being done or effected, or capable of being dealt with successfully." Webster's New Collegiate Dictionary, 1980. Instead, "feasible"

is given a predominantly economic emphasis in which the Administrator, as part of the standard-setting process, is explicitly directed to "take costs into consideration" in determining which technologies are the best available.

Under EPA practice, and especially pursuant to the dictates of Executive Order 12291, the consideration of costs in standard-setting has evolved into a formal exercise in cost/benefit analysis. The requirement to conduct such analyses has resulted in repeated efforts to place a dollar value on the hypothetical lives to be saved by establishment of a particular MCL. Not only is such valuation difficult and morally offensive, but application of principles of discounting over long disease latency periods can also have the perverse result of devaluing life to zero. A recent calculation of this kind was instrumental in aborting EPA's attempt to propose a ban and phasedown of asbestos uses in the United States under the Toxic Substances Control Act. Thus, the value our society holds most precious, human life, may be given little or no weight in decision-making that was originally intended to maximize protection of public health.

We do not believe that Congress ever intended such a result, but current law and proposed changes to the standard-setting provisions will perpetuate the abuse described above, unless the language is changed. We therefore recommend that the cost consideration language be deleted, and that the term "feasible" be redefined to incorporate a technology-forcing concept of

availability, as suggested below:

> "(4) For the purposes of this subsection, the term 'feasible' means feasible with the use of the best technology, treatment techniques and other means which the Administrator finds are available. The term available means demonstrated to be effective in pilot studies, and capable of being achieved by a large public water system. For the purpose of paragraph (2), the use of granular activated carbon is available for the control of synthetic organic chemicals and any technology, treatment technique, or other means found to be the best available for the control of synthetic organic chemicals must be at least as effective in controlling synthetic organic chemicals as the use of granular activated carbon.

We also urge the Committee explicitly to disapprove the use of formal cost/benefit analysis in standard-setting to protect human health in view of the extreme difficulty of placing a dollar value on the health protection benefits to be achieved, and the consequent bias of such analyses in favor of the cost side of the equation as the result of numerical devaluation of lives saved or their entire deletion from consideration.

(d) Authorize promulgation of treatment techniques where more efficient or likely to provide a greater degree of health protection

The proposed amendment to §1412(b)(6)(A) would continue the limitations in current law on the circumstances in which the EPA Administrator can promulgate a treatment technique requirement in lieu of an MCL. In light of the myriad contaminants present in drinking water, and the complexities of establishing numerical requirements that will adequately protect health, we oppose limiting the Administrator's discretion to prescribe treatment techniques only to instances where he or she "makes a finding that it is not economically or technologically feasible to

ascertain the level of the contaminant."

S.124 would require EPA to move forcefully to reduce human exposures to toxic substances in drinking water. How that goal is best accomplished should be left to the discretion of the Administrator. In our view, EPA needs to be able to consider all feasible regulatory options in fashioning remedial or preventive requirements for the protection of drinking water. An artificial hierarchy of response such as that contained in both the bill and in present law, will hinder rather than facilitate expeditious achievement of the objectives of the Act.

We therefore urge the Committee to amend proposed §1412(b)(6)(A) as follows:

> (6)(A) The Administrator is authorized to promulgate a national primary drinking water regulation that requires the use of a treatment technique in lieu of establishing a maximum contaminant level, if the Administrator makes a finding that use of a treatment technique would be more efficient or would provide a greater degree of health protection than establishing a maximum contaminant level. In such case, the Administrator shall identify....

(e) Mandatory filtration and disinfection

We support the requirement to develop and implement filtration requirements for public water systems supplied by surface water sources, and the imposition of disinfection requirements upon all public water systems. The incidence of reported outbreaks of waterborne disease suggest the need for improvements in water treatment in order to provide basic health protection to all consumers supplied by public water systems. We recommend, however, that the timeframes provided in S.124 be

tightened for filtration, and be established in the first instance, for disinfection.

With regard to filtration, a date should be included for the specification of procedures by the Administrator for state determinations of systems requiring filtration. Thereafter, states have eighteen months to adopt implementing regulations, two more years to determine which systems require filtration, and then complete discretion in the prescription of compliance schedules. In our view, the length of this schedule and the absence of a date for EPA to promulgate the state determination procedures are inconsistent with the apparent urgency of the problem. We recommend that both the criteria and the determination procedures be promulgated by EPA within the same twelve month period, that state compliance periods be shortened, and that a maximum length of time be specified for individual system compliance.

With regard to disinfection, we urge the Committee to establish a schedule for the promulgation of regulations by EPA. Recent history demonstrates the critical importance of such Congressional timetables in effecting implementation of statutory directives and assuring the provision of resources to accomplish the task. As currently drafted, the disinfection provision merely directs the Administrator to promulgate regulations, but establishes no schedule for doing so. Given the presence of schedules in many other provisions of S.124, the absence of a schedule here suggests that disinfection is a lower priority

concern. If, as we believe, this is not the Committee's intention, an implementing schedule should be added to the disinfection provision.

3. Monitoring for Unregulated Contaminants

One of the most important features of S.124 is the direction to EPA to establish a program of monitoring by public water suppliers for the presence of unregulated contaminants. Such a program is urgently needed in order to ascertain the quality our public water supplies, and to rationalize EPA's priority-setting and standard-setting activities.

The following concerns remain with regard to the monitoring provisions of S.124:

(a) Shorter schedule for establishing the program

Much time has passed since the need for a monitoring program for unregulated contaminants was debated in the Congress, and EPA has begun work to develop such a program. Thus, we do not believe that the Agency should be given or will need eighteen months after enactment to promulgate implementing regulations. One year after enactment should suffice.

(b) Scope and frequency of system participation in the monitoring program

Once EPA has identified and published its list of unregulated contaminants to be monitored, we believe all public water systems should have to look for all contaminants on the list at least once, to establish a baseline. Thereafter, a reduced program of monitoring can be knowledgeably prescribed. In this connection, we are also concerned that a five year

interval for conducting initial or repeat monitoring is too long. As an alternative, we recommend that the specified period be a maximum of three years. The State of Florida, which has an extensive drinking water monitoring program already in place, has also selected three years as the appropriate interval.

(c) Deletion of contaminants from the monitoring program

S.124 provides that states may delete contaminants from EPA's designated list, based upon an "approved assessment of contaminants potentially to be found" in an individual system. Moreover, approval is automatic if EPA fails to act within sixty days of submission of such an assessment by a state. We have serious reservations about both of these provisions.

Monitoring programs at the state level, especially the program in California, have demonstrated that our ability to predict accurately that certain contaminants will or will not be present, is very limited. In view of this limitation, and because the purpose of the program is to gather information on the actual quality of individual public water systems, we urge that deletion not be permitted until a first round of monitoring for the entire EPA list of unregulated contaminants has been completed. As stated above, lesser frequencies for monitoring or even deletion of particular contaminants can then be knowledgeably approved.

We are opposed to automatic approvals of such reductions in the scope of the monitoring program under any circumstances, however. Prudent public policy and the need to protect health

would dictate a mandatory period in which EPA must act, rather than automatic approval of proposed reductions in the monitoring program.

(d) Direct notification of monitoring results

Public interest in the quality of drinking water, and of the environment in general, is very high across the country. This interest is reflected in a plethora of state and local right-to-know laws that have been enacted in recent years. In recognition of this demand for information, we strongly support direct notification of persons served by a public water system of the results of monitoring for unregulated contaminants, accompanied by advisories describing what is known about the substances detected. EPA should be directed to prepare and provide such advisories for contaminants included in the monitoring program.

4. Public Notification

For the reasons stated above, we believe that timely, informative public notification of violations of primary drinking water regulations is very important to the effective functioning of the Safe Drinking Water Act. The intent of public notification is to apprise water consumers of possible health hazards, to enable affected consumers to demand remedial action or to seek alternative water supplies, and to increase public awareness of and concomitant willingness to pay for needed improvements in water treatment practices. To this end, we urge that:

a) notices of MCL violations be supplied to persons served by the public water system no later than two weeks after the violation occurs;

b) notices of violations be reported to EPA or the primacy agency on at least a monthly basis; and that

c) violations information be made freely available to the public by the EPA or the primacy agency as a matter of public information and to facilitate citizen enforcement of violations where the primacy agency fails to act.

5. Additional Restrictions on Underground Injection of Hazardous Substances

As data collected by EPA under the Resource Conservation and Recovery Act show,[1] by volume underground injection is the most prevalent form of land disposal of liquid hazardous wastes. Reports submitted to EPA by operators of injection wells indicate that about 60% of all hazardous waste disposed according to the regulations is injected. This percentage exceeded ten million gallons of hazardous waste in 1981. Another 35% is disposed in surface impoundments, and 5% in landfills. Only a relatively small quantity is incinerated.

EPA's data further indicate that the wastes most frequently injected into deep wells are corrosive wastes (38%), organic compounds (36%), reactive wastes (8%), and metals (6%). The

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1 Environmental Protection Agency, Hazardous Waste Disposal Survey, EPA 530/SW-84-005 (1984).

remaining 12% of injected hazardous wastes are uncharacterized. Moreover, the evidence suggests that the use of this form of disposal of hazardous waste is increasing.

The potential for groundwater contamination from underground injection exists and has already been documented. This potential for contamination arises from the fact that even in confining formations that are believed to be completely impermeable, such wastes can react chemically with the formation, creating migration pathways. Other wastes can produce gases that can build up and fracture the rock, thereby creating migration pathways. Still others can precipitate out of solution, causing pressure buildups. Yet, EPA's underground injection control regulations are less stringent than requirements imposed under RCRA upon other methods of land disposal of hazardous waste. Among the major disparities are the following:

a) No groundwater monitoring is required of the injection zone, the confining layers and nearby underground drinking water sources.

b) Virtually no restrictions are imposed on the types of wastes that can be injected.

c) No post-closure care or financial responsibility requirements are imposed with the exception of requirements to plug the well.

d) There are currently no corrective action requirements for cleaning up contaminated groundwater.

e) There are few restrictions on siting injection wells.

Both Congress in the Hazardous and Solid Waste Amendments of 1984 and EPA in its general implementation of RCRA and the Safe Drinking Water Act appear to have adopted a presumption that underground injection is preferable to other forms of land disposal, even though our understanding of what happens to hazardous waste in subsurface formations is quite limited. Consistent with this presumption, waste-end tax proposals being considered as part of the reauthorization of Superfund would tax injected wastes at only one-third the rate of landfilled wastes.

Because of the uncertainties surrounding the ultimate environmental fate of injected wastes, we believe that underground injection of toxic wastes should be discouraged rather than encouraged, as present policy appears to do. Accordingly, we urge the Committee to amend the Safe Drinking Water Act further to require:

(1) comparability between EPA's underground injection regulations and RCRA regulations governing all other land disposal of hazardous wastes;

(2) a prohibition on underground injection unless the applicant for an injection permit demonstrates that reasonable and adequate surface treatment and disposal alternatives are not available;

(3) a prohibition on the exemption of underground sources drinking water from hazardous waste disposal. This objective can be accomplished by providing, as did

S.2649 last year, that section 146.04(c) of title 40 of the Code of Federal Regulations is repealed effective on the date of enactment of these amendments.

(4) a prohibition on the injection of wastes that can react with subsurface formations to create pathways for migration into groundwater, particularly in conjunction with wastes that are not rendered non-hazardous by conditions in the subsurface; and

(5) a prohibition on the continued injection of corrosive waste into injection zones confined by formations containing predominantly carbonate rocks or carbonate cemented rocks, once a fixed vertical interval around the borehole has been dissolved.

6. Protection of Sole Source Aquifers and Critical Aquifer Recharge Areas

S.124 contains a section that would provide for "demonstration programs designed to protect critical aquifer protection areas located within areas designated as sole or principal source aquifers under section 1424(e) of the Safe Drinking Water Act." We agree that urgent federal attention is needed to protect our most vulnerable aquifers from contamination, and that development and implementation of plans to identify and manage critical areas should be facilitated as expeditiously as possible. We do not believe, however, that enactment of a demonstration grant program is a sufficient

response to the potential groundwater contamination problem our country is facing.

In our view, a major aquifer protection program resembling the one included in the Safe Drinking Water Act amendments passed by the House in the last session, or described in S.24, would be more appropriate to the task. Two major amendments should therefore be included in S.124. The first should require EPA to establish criteria for sole source designations by including the following language in §1424(e):

New Criteria for Areas Designated Under §1424(e)

(1) Within 12 months after the date of the enactment of this section, the Administrator shall, by rule, establish criteria for the areas to be designated under §1424(e) after such date of enactment. The criteria shall include aquifer use, vulnerability, water quality and quantity, and unavailability of alternative drinking water supplies.

(2) No designation made under §1424(e) before the date of the enactment of this section shall be reevaluated pursuant to new criteria under this subsection.

The second amendment should provide a remedy for the glaring deficiencies in the scope of §1424(e), which currently applies only to federal financial assistance to projects in a designated sole source area. Because of the narrow focus of §1424(e), a large array of state and local activities are in no way affected or restricted by a sole source designation. Thus, a county may propose to site a 1,600 acre landfill in a designated sole source area, as is currently occurring in Rockaway, New Jersey. If this giant landfill is constructed on the proposed site, the

underlying sole source aquifer will be seriously endangered, and the objective of §1424(e) will be utterly defeated.

Enactment of a program to provide incentives to states and municipalities to develop and implement comprehensive management plans for vulnerable groundwater areas is a critically needed first step toward achievement of the objective of §1424(e), which is protection of such sensitive aquifer areas. We therefore strongly urge the Committee to substitute a broader groundwater planning program, such as that contained in S. 24 or in the bill passed by the House in 1984 (without the groundwater classification requirement) for the demonstration program currently contained in S.124.

It is time to move forward with a broad planning program to protect our nation's groundwater resources. We are hopeful that the Committee will enact such a program as part of these pending amendments to the Safe Drinking Water Act.

7. Other Provisions of S.124

(a) Enhanced enforcement authority

We strongly support the provisions included to provide EPA with authority to issue administrative orders under the public water supply and underground injection programs of the Safe Drinking Water Act. Such authority should increase the Agency's ability to enforce compliance with the Act. We do have reservations, however, about the wisdom of or need for the provision authorizing the Administrator "to compromise, modify or

remit, with or without conditions, any civil penalty assessed" against any person. Since mitigating factors should be considered before rather than after a penalty is assessed, we wonder about the circumstances in which such blanket authority would be exercised. To our knowledge, such a grant of discretion appears in no other environmental statute. We therefore urge the Committee to delete the provision from the two sections in which it appears.

(b) Tampering

We support the imposition of severe penalties for tampering with public water systems.

(c) Variances and exemptions

We support the proposals to streamline the variance and exemption authorities in current law by requiring compliance schedules to be established at the time a variance or exemption is granted, and by placing reasonable conditions and time limitations on these exceptions to full compliance with the Act's requirements. At the same time, we urge the Committee to delete the reference to compliance costs in the variance section because it is likely to create a system of economic variances.

Under the structure of the Safe Drinking Water Act, economic hardship was intended to be addressed through the issuance of exemptions rather than variances. If economic considerations are permitted in the variance procedure, the differences between variances and exemptions will blur, and a system of open-ended

economic variances is likely to be created that lacks the action-forcing thrust of time-limited exemptions.

9. Judicial Review

We are strongly opposed to the inclusion in S.124 of an amendment that would drastically alter the existing judicial review provisions of the Safe Drinking Water Act. The difference between "any general regulation for the administration of this title" in paragraph (A), and the regulations covered by paragraph (B) is very unclear, and likely to lead to litigation in many cases to determine which section applies. The distinction between "a circuit in which the petitioner resides or transacts business" (paragraph (A)) and "any appropriate circuit" (paragraph (B)) is similarly confusing.

The proposal would pose other problems for litigants in addition to the foregoing. For example, the basic principle of venue, i.e., the plaintiff's choice of forum, is defeated by a system in which a second petition for review as filed as long as thirty days after the first can defeat the first petitioner's choice of forum. In addition, reliance on an unspecified administrative mechanism for random selection of a forum could result in an inconvenient forum for most of the parties involved.

We believe that such a drastic revision of the venue provisions of the Safe Drinking Water Act and of existing federal law as currently codified in title 28 of the U.S. Code, should not be undertaken without the most careful scrutiny and consideration of the potentially adverse impacts upon

litigants. We therefore recommend that such a provision not be included in S.124.

10. Suggested Additions to S. 124

a. Civil Actions by Public Water Systems and Other Persons

Under the current law, public water systems and individuals whose water supplies are contaminated by the polluting activities of others, have to rely upon sporadic enforcement by government agencies, or the admittedly inadequate private tort system[2] to abate the pollution or to reimburse them for expenses incurred in treating or replacing the contaminated water source. With the reduction in federal and state enforcement programs resulting from budget cuts, water suppliers and private citizens are increasingly forced to rely upon the private tort system for any redress. Creation of a private right of action in the Safe Drinking Water Act would greatly enhance the ability of persons damaged by the activities of third parties to reach those who are responsible. The result would be to raise the standard of care in areas of activity that result in contamination of drinking water while enabling injured parties to obtain redress where government cannot or will not act.

An amendment to create such a private right of action could provide as follows:

Civil Suits

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2 H. Rep. No. 97-12, Injuries and Damages From Hazardous Wastes - Analysis and Improvement of Legal Remedies, 97th Cong., 2d Sess. (1982).

Section_____. Any person may bring an action in the appropriate United States district court (as determined under the provisions of title 28 of the United States Code) (A) against any person causing or contributing to the presence of any contaminant in a source of drinking water if such contaminant may have any adverse effect upon the health of persons; or (B) against the Administrator or appropriate state agency for failure to regulate the source or sources of such contaminant under applicable statutory authorities.

(1) The appropriate United States district court (as determined under the provisions of title 28 of the United States Code) shall have jurisdiction over any action brought under this subsection and may issue an order

(A) requiring the person causing or contributing to the contamination concerned to (i) abate such contamination; (ii) provide reimbursement for all or part of the costs incurred in treating water to remove or reduce the level of contamination, or to obtain alternative drinking water supplies; or (iii) any combination of the actions referred to in subparagraphs (i) and (ii); or

(B) requiring the Administrator to take appropriate actions under applicable statutory authority to identify and abate those sources of contamination.

(2) Nothing in this subsection or in any other provision of this Act shall be construed to restrict or preempt any right which any public water system or any other person or class of persons may have under any statute or common law to seek enforcement in any Federal, State, or local court, or in any administrative proceeding, of any provision of this Act or any other relief regarding the contamination of any drinking water supply.

(b) Citizens petitions

We urge the Committee to include a mechanism in S.124 that would direct EPA to establish a procedure and criteria for accepting and responding on a timely basis to petitions to amend the priority list for standard-setting or the list of unregulated contaminants for which monitoring is required. A suggested model for such an amendment is §21 of the Toxic Substances Control

Act. Inclusion of such a procedure would help to ensure that EPA continues to add appropriate contaminants to the priority and monitoring lists.

Conclusion

As stated above, we strongly support enactment of S.124, with the suggested modifications and additions we have described. Drinking water has been a neglected resource for years and has suffered a decline in quality across the country as a result. S.124 represents a well-conceived effort to strengthen the Safe Drinking Water Act by requiring EPA to set new drinking water standards, to initiate a monitoring program to identify contaminants that should be regulated, and to expand federal and state protection of drinking water quality.

Renewed Congressional concern about drinking water is appropriate in light of continuing disclosures of serious contamination problems. We welcome that concern and intend to work diligently for passage of these amendments.

TESTIMONY BEFORE THE SENATE TOXIC SUBSTANCES SUBCOMMITTEE
RECOMMENDATIONS TO IMPROVE THE SAFE DRINKING WATER ACT
BY
MERILYN B. REEVES, BOARD OF DIRECTORS
LEAGUE OF WOMEN VOTERS OF THE UNITED STATES
MARCH 21, 1985

I am Merilyn B. Reeves, member of the Board of Directors of the League of Women Voters of the United States, I am testifying today on behalf of over a quarter of a million League members and supporters from across the United States.

The League has long been active on natural resources issues through the work of our 1300 local Leagues. At our 1984 National Convention 2000 representatives of these League members voted overwhelmingly to put a special focus on water issues through the establishment of a League Water Resources Task Force. Working to protect our drinking and groundwater resources will be a key part of this top priority effort. I appreciate the opportunity to present this mandate for safe drinking water, a mandate which polls show is shared by a broad cross-section of America, to this Subcommittee.

I would also like to take this opportunity to express our appreciation to Sen. Durenberger for introducing S. 124 and holding these hearings on its contents. Without the efforts of the chairman and other members of this subcommittee we could never have come so close to reauthorization of the Safe Drinking Water Act

(SDWA) in the 98th Congress, nor could this effort have been renewed so speedily in the 99th Congress. And make no mistake, speed is of the essence. A significant portion of America's water may be unsafe to drink. The Environmental Protection Agency's action in promulgating drinking water standards has been slow and inadequate at best. There is much room for improvement of the current SDWA and even greater room for improvement in its implementation. We are pleased that S. 124 takes many steps to remedy these problems and also preserves much of what is good in the current Act. But, there are several improvements that we believe should be made in this bill. We have already discussed many of these changes with members of this subcommittee, so today I will limit my comments to discussing the basis for a federal role in protecting public health and three of our areas of concern, standard setting language, public notification regulations and protection of groundwater.

FEDERAL ROLE

All of these issues should be considered within the context that the SDWA must be reauthorized as soon as possible. Rumors persist that forces bot h within the Administration and without have pushed for abolishment of EPA's Office of Drinking Water and repeal the SDWA. Behind ideologic and unrealistic claims of states' rights and in a deregulatory frenzy, these forces have lashed out against the federal government's duty to aide in the protection of the public health and welfare. S. 124 is a good mark-up vehicle because it rejects this call by reauthorizing the Act until 1989, preserving health effects as the basis for regulating contaminants and setting drinking water goals and calling for increased monitoring for unregulated contaminants. Though implementation of much of SDWA will and should

occur at the state level, the League believes unequivocally that the development of uniform health standards and broad determination of the public welfare are the natural, legitimate and reasonable duties of the federal government. S. 124 follows closely what Chairman Durenberger calls the "simple and appropriate role of government." Yet, we believe the public health needs of America demand appropriate actions not contained in S. 124.

Unfortunately not all drinking water in the United States is safe to drink. At present, not all drinking water that comes from a surface water source is filtered. Not all drinking water is disinfected, despite the fact that technologies which are affordable and which remove traditional bacterial contaminants are readily available.

What is the record of health-standard violations? U.S. EPA reports on the number and severity of violations are not as complete as they should be -- particularly since they do not take into account the size of the population affected, only the number of total treatment systems in violation. An official report dated June 13, 1983 indicated that 9.8% of the approximately 59,000 community systems were persistent violators of both established maximum contaminant levels (MCLs) and monitoring and reporting requirements. These are the bacteriologocial standards most associated with the potential for acute illness. The June 1983 report also noted that 20.3% of community water supply systems were intermittent violators. One can become just as ill as a result of an intermittent violation as with a persistent violation. By July 1983 these figures had been massaged or clarified and EPA reported to Congress that only 7.6% of the systems were persistent violators -- a decrease of 2.2% -- and that the number of intermittent violations had increased by 4% to 24.3%.

Whichever set of figures one uses, the startling fact remains that about 30% (17,700) of community water systems were either intermittent or persistent violators of the MCLs for microbiological standards and the monitoring and reporting requirements in 1982. Depending on which EPA report one uses, the number of systems that persistently violate these standards range from about 4,500 to 8,800 (persistent violations are defined as those that continue for a period of more than four months). Obviously such reporting is not an exact science. We believe that what is reported represents a conservative estimate of the total level of violations.

Violations are not confined to small systems. According to the data that is available almost 10% of the large and very large systems were reported to be in violation of MCLs in 1982. About 6% of the medium-size systems and 19% of the small and very small systems were reported to have violated MCLs in 1982.

We did not find a breakdown of violations according to source, but we assume that most MCL violations are for systems that use surface water. However, contamination is being reported at increasing and alarming rates in groundwater, which was once assumed to be pristine. A recent EPA random survey found detectable levels of volatile synthetic organic chemicals in 28% of systems serving more than 10,000 people and in 17% of those serving smaller populations. Experts may disagree about the significance of threats to public health, but these are man-made toxics. They do not belong, and are unwelcome, in any water supply. For groundwater they are indicators of higher future concentrations since contaminants move in plumes very slowly.

In addition to the random survey, EPA has completed what was described as a desk-top review of the numbers, location and potential effects of hazardous and other waste surface impoundments on ground-water quality. EPA estimates that there are about 181,000 such waste ponds, most of them unlined. About 30% are located on thin or permeable soil over the top of a usable acquifer. About 40% of those impoundments that contain industrial or municipal wastes are located in areas that have thin or permeable unsaturated soil and are also located over highly transmissive aquifers containing water that is currently used as a drinking water supply or is of a suitable high quality. Only 7% of these impoundments appear to be sited in a manner that poses little or no threat to groundwater quality.

Chemical and hazardous waste pollution are not only threats to water quality. In 1983, communities in Pennsylvania experienced outbreaks of Giardiasis, which is caused by the tiny protozoan Giardia lamblia. Experts report that 16,500 of these protozoa can fit on the head of a pin. It evidentally only takes about 10 of these little critters to cause diarrhea, nausea, bloating, abdominal cramps and other problems. Without proper treatment the illness can continue for months. To avoid illness citizens in Scranton and Mckeesport were warned to boil their water. Giardia is reported to be very common in cold mountain streams, reservoirs and lakes not only in Pennsylvania and other parts of the Northeast, but also throughout the Rocky Mountains and the Northwest.

Contamination of U.S. drinking water is not some theoretical potential problem, or something that rarely occurs. The problem is here, now. At increasing and

alarming rates citizens are being told to boil their drinking water. Many treatment plants are so old or inadequate they frequently break down. Many large cities deliver unfiltered water through miles of ancient corroded pipes, and with such inadequate monitoring that there is no assurance that water quality is maintained throughout the entire system. Some cities spend large sums of money to treat drinking water and then store it in open reservoirs, unprotected from air pollutants and from animal or bird intrusion. Treatment plant operators are frequently ill trained and ill equipped to operate and maintain plant facilities. In many communities water rates are too low to maintain the treatment systems and in some cities revenues are still being diverted for other budgetary needs, thus reducing the amount of money available for upgrading or maintenance. Few communities have established effective water conservation programs so that the public can learn to appreciate the value of water. Upgrading of drinking water systems is progressing far too slowly. However, S. 124 with a few important improvements can change this.

STANDARD SETTING

The EPA standard setting process drags on at a snail's pace. Ten years after the Act was signed into law, we are still relying on a handful of standards that were set by the Public Health Service. Many of the substances for which EPA has been unable to develop standards are known carcinogens, mutagens or poisons. Quite simply, we have waited too long. EPA must be given strict deadlines for setting these standards.

S. 124 fulfills this need by mandating that EPA set standards for approximately 75 substances that EPA has listed for possible rulemaking in the Federal Register. In addition, it mandates that EPA develop and update yearly a priority list of substances. Unfortunately all these mandates may well be undone by allowing EPA to not set a standard by merely publishing a determination that in their opinion the substance has no adverse health effects. On the surface this may seem appropriate, but we are concerned that S.124 establishes no legally defensible criteria to challenge an arbitrary determination. The Agency has come under much pressure by inddustry and from OMB to weaken or not set environmental standards. For instance, EPA recently proposed a virtual total ban on lead in gasoline. Yet, a few years ago the Administration was moving full speed ahead to relax lead standards regardless of the health data. EPA should be forced to set standards for the 75 substances listed for rulemaking in the Federal Register. The list is a good list. The substances on it have been studied for years under the SDWA and other environemental laws. The carcinogicity and toxicity of many of them are known beyond any reasonable doubt. We have already waited too long for standards for these substances. EPA needs deadlines for action, not guidance for inaction. By clearly mandating that these standards must be set, no clearer message can be sent, no greater protection of public health could result.

This proposal would also solve political problems that arose last year over the use of "rational basis" language as the test for standard setting. We support the use of "rational basis" language and quite frankly, we do not understand many of the objections which were raised by tnose who opposed it. Claims that it would force EPA to set unnecessary standards fly in the face of our past experiences with health based standards in other environmental laws. In fact, our direct

experience with implementation of SDWA is that the problem is clearly not over-zealousness by the Agency, but getting them to set standards at all. "Rational basis" language is a logical and reasonable test for setting standards to protect public health. If this process for allowing EPA to refuse to act is not acceptable, then EPA should be required to act in all cases where substances have been listed.

Another improvement should be made to the standard setting provisions that would ensure that EPA does an adequate job of listing new substances in its annual upadate. The law should allow citizens to petition EPA to add substances to the priority list. EPA should be allowed a reasonable amount of time to respond, but if EPA fails to respond, then the substance should automatically be listed and a standard should have to be proposed. EPA could decide not to list a petitioned substance under this procedure, but only if it did not meet specific criteria concerning levels of toxicity, frequency of occurence, potential threat to public health, etc. If EPA made an arbitrary and capricious decision not to list a substance, they should then be subject to suit. Such a program would allow greater public participation and provide an ongoing check against EPA inactivity.

PUBLIC NOTIFICATION

The public has placed its trust in America's water systems and we believe this trust should be rewarded with the fullest possible disclosure of information about what is in our drinking water. We believe that people should be able to make informed choices about issues concerning the health and well-being of their families

and communities. As Thomas Jefferson said, "people are inherently capable of making proper judgments when they are properly informed." If the public is led to believe their water is safe and then find out later they were not informed when there was a problem, this trust will be lost forever. S. 124 and the current SDWA are inadequate in their requirements for public notification of exceedances of Maximum Contaminant Levels (MCLs). When MCLs are exceeded, S. 124 calls for notification in newspapers no later than three months after the exceedance. The law should clearly state that verified exceedances of MCLs should be reported immediately, and in no case later than 14 days after the exceedance. The exceedance reports should not be buried in the legal notice section of the newspapers but distributed through actual news releases and also reported directly in water bills. The law also should require that a report be made to the Administrator of the EPA regarding the exceedance.

It is unconscionable to us that someone should go three months drinking water which contains contaminants above the MCLs before notification takes place. It is fundamental that people should be given the best possible information as soon as possible. We do not believe in alarming people unnecessarily. The Administrator should be allowed to develop criteria to ensure monitoring results are solid and verified, but such verification should occur as quickly as possible.

These arguments also apply to monitoring of unregulated contaminants. S. 124 makes a major improvement inthe current law by calling for monitoring of unregulated contaminants every five years and making the results available to individuals

who request it. While this program breaks new ground it is still inadequate in providing data to the public. The law should call for an initial baseline study of contaminants listed by EPA, remonitoring every three years rather than five and disclosure of results directly through water bills and indirectly through newspaper notices and news releases.

A review of monitoring results from the states has demonstrated that often contaminants have been found in places where they were not expected, nor been detected before. A baseline study for all unregulated contaminants listed by EPA would provide valuable data and ensure the greatest protection of public health. By monitoring every three years, a greater degree of accuracy and earlier warning of problems will also be assured. Given the fact that this monitoring will occur on a relatively infrequent basis, it does not seem particularly onerous to provide for direct notification of results in water bills.

We reject completely the paternalistic argument that the public should not receive information that would only upset them. By providing the information to newspapers the many renters who never see water bills will be given access to this information. We also reject arguments that too little information can be provided in a water bill, so no information should be provided at all. In addition to the results of the test, EPA should develop a standard two or three sentence description of why this contaminant is being monitored. In addition, more in-depth information (a page or so will do) should be made available from EPA or the primacy state if requested. The development of an informed public is a fundamental tenet of the League's work. We feel such a program is reasonable, economical and essential to a good bill.

Comments on Senate Bill S124
By State of Illinois
Environmental Protection Agency
and
Department of Public Health
April, 1985

The State of Illinois Environmental Protection Agency and Department of Public Health appreciates having this opportunity to comment on Bill S124 and requests that these remarks be made a part of the record.

The Safe Drinking Water Act Amendments of 1985 (Bill S124) contains some changes beneficial to the public water supply program as seen by the State of Illinois. Some of the changes, however, will work against the improvement of the program in the State. Providing safe drinking water is of the utmost importance. There needs to be clarification that the proposed changes do not refer to non-community water supplies. There are over 7600 non-community supplies in Illinois alone which would be required to face the administrative and financial burdens of regulations intended for the larger community systems. Most non-community systems consist of a well and no distribution system except for the plumbing in the building which is served. The financial burden of complying with treatment, sampling and analyses and other requirements being proposed is beyond the financial capability of these small facilities. Trying to deal with requests for variances and exemptions from non-community systems would overwhelm the resources of the State.

It does not appear that Section 2 of the Bill takes into account that there is to be any review of the standards based on recently collected information. That is, the current standards will become permanent. The interim standards for selenium, barium, radium, and alpha radioactivity are all questionable. Current regulations would allow for peer review and comment

outside USEPA before becoming permanent standards. However, the proposed amendments will make this review unnecessary. This necessary peer review can translate to a considerable equipment cost savings to individual public water supplies should, after peer review, it be found that a standard can be set at a higher level. An example of this is the recent revision of the fluoride standard. Although action was taken through the court system, evaluation of all pertinent information led to adoption of a standard at a level greater than originally proposed.

Mandating use of granular activated carbon (GAC) as a standard poses a significant problem. Previous surveys by USEPA and others have shown that GAC, while capable of removing higher weight organic compounds efficiently, also has the capability of putting back into the water some of the substances when the organic compounds are being received on the GAC at lower levels. Additionally, when the GAC is exhausted, it has the capability of putting back these materials in larger quantities than the incoming water. This, thereby, increases any risk which may be present. The efficiency of such methods should be based on an absolute standard rather than one which depends upon GAC as a standard of compliance.

We support the proposal for mandatory filtration. Giardia lambila will not show up in the routine microbiological testing and is not inactivated or removed by chlorination. Only proper filtration or complete treatment which concludes filtration can remove this organism.

Enforcement actions mandated by Section 3 of the Bill may act to retard, rather than enhance compliance. An adversary situation will be established such that no action will be taken by a public water supply in order to avoid jeapordizing its position in a court proceeding. Since court cases require a

very long time to resolve, time is taken away from that in which the supply could be using to come into compliance. Most public water supplies faced with a court action will be classified as small or extremely small public water supplies. The enforcement branch which would be bringing litigation against this class of supply is usually very reluctant to spend time on bringing a suit against a small entity. Consequently, even though the primacy agency is willing to bring a case, legal relief cannot be obtained through existing processes. This only serves to allow for a worsening situation where the public water supply cannot be brought into compliance. Water supply officials for these extremely small public water supplies during this time may also exercise an option to discontinue water supply service in order to extradite themselves from possible further litigation. Should this happen, the people formally served by the public water supply would be forced to develop private sources of supply. These sources are generally not as safe as a public water supply because of possible improper construction or location near a source of contamination. Enforcement actions, therefore, should be based on a willingness or ability to correct deficiencies and come into compliance. When no corrective actions are obvious, enforcement actions need to be prompt. Enforcement should be withheld to the point where there is no reasonable chance that compliance can be obtained.

The existing regulations now require public notice for insignificant violations and are much overdue for change. The primacy agency very much needs discretion in trivial matters. An example is when a water supply must make public notice when only one or two samples are missing from a large number of samples in a set required for monthly monitoring.

Section 5(a) of the bill is very detrimental to the Safe Drinking Water Act and would require wasting money to install and operate equipment which is known, in advance, to have defects to the extent that it is known that it will not work. When it is known that the installation of equipment will not work, it is unreasonable to waste money to install equipment before a variance can be granted. This is a particularly major defect of S124 and will create more problems than it solves. Inclusion of this portion may very well result in public water supply officials acting in open opposition to the Safe Drinking Water Act and the associated regulations.

The proposal to have the administrator pay for analysis of water samples collected from supplies serving less than 150 service connections (Section 1445(a), under subparagraph (6)) does not provide for states which do all analyses without charge. It is not clear that the Administrator will reimburse these states for analyses. These states will be severely hampered since adequate funds are not available for existing programs. If additional analyses are required, existing programs will have to be decreased. The Bill needs to be clarified to show that payment for these analyses will be paid regardless of whether the state performs the actual analyses or whether it is done in a private laboratory.

Section 9 of the Bill is an excellent step in that it provides penalties for tampering with a public water supply. Although some states have equivalent legislation, there are many which do not. In such cases, this would be a much welcomed requirement.

The new Section 1426(a), although suitable for protecting against underground injection, may not take into consideration a sufficient number of factors to adequately protect groundwater sources. Each site needs to be

examined for hydrogeologic conditions before a distance requirement is set. For example, a fractured limestone formation would allow contamination to travel for miles before the contamination was revealed in a well.

Our comments pertaining to enforcement provisions of Section 11(a)(1) are the same as given for Section 1414(a)(1)(B) and have been discussed above.

The addition of administrative orders is an excellent idea if there is a judicious use of these orders and if the cooperation of the states is sought. With time, this will overcome some of the apparent lack of interest in enforcement cases involving small water supplies. However, the judicial use should be based on weighing the alternative of halting use of a public water supply versus the use of private wells which are inherently not as safe, either because of construction or location. The problems which are typically encountered by private wells involve proximity to septic tanks and other similar sources of contamination. Every reasonable effort should be made to keep existing public water supplies in operation when the alternative is a small unregulated system or private wells.

Provisions of this bill are generally good and provide for some long overdue changes; however, there are some major deficiencies which have been previously mentioned. With these corrections, the amended bill will greatly enhance the provision of a safe potable water to citizens of the country.

If additional discussion or information is needed, please contact Roger D. Selburg, P.E., Acting Division Manager, Division of Public Water Supplies, Illinois Environmental Protection Agency, 2200 Churchill Road, Springfield, Illinois 62706, Phone: 217/785-8653 or Clinton C. Mudgett, P.E., Chief, Division of Engineering and Sanitation, Illinois Department of Public Health, 535 West Jefferson Street, Springfield, Illinois 62761, Phone: 217/782-5830.

RDS:dks/657e, 33-37

Comments by the Wisconsin Department of Natural Resources on
S. 124 "Safe Drinking Water Act Amendments of 1985"

General Comments

1. We support simultaneously proposing Maximum Contaminant Level (MCL) goals and MCL mandatory regulations because it allows the determination of the full impact of the proposal at the outset. In addition, since it takes a full review to establish either the goal or the mandatory regulation, it is most efficient to do it simultaneously.

2. We have not made projections for the costs of implementation of the proposed amendments. However, the public water system supervision program grants have been dramatically reduced in the last 5 years and there is no ability to assimilate new programs unless new funds are also provided.

3. The existing Safe Drinking Water Act (SDWA) and attendant regulations indicate that protection of groundwater is to be afforded to only that groundwater which is or may be expected to supply drinking water for public water systems. We strongly suggest that the coverage be broadened to include and assure protection for all groundwater, not just that serving public water supplies. Subsection 1421(d)(2) of the SDWA should be amended to accomplish that.

4. The planning process established in S. 124 is only applicable to areas designated as sole or principal source areas [page 27, lines 17 to 22; section 1428(a)]. Wisconsin currently does not have any areas so designated. Further, the concept of planning to assure protection of groundwater resources should not be limited to sole or principal source areas. Protection of the groundwater resource should be encouraged in all areas of existing or potential groundwater use. We encourage the broadening of the proposed statute to allow the planning process to proceed under the terms of the statute in any area approved by the Governor.

5. Any planning to be done must be flexible in order to address more specific needs. While there is a need for the federal government to specify some minimum criteria, this should be done with the recognition that in the past, planning done under federal mandate and to federal specifications has often not been very useful. Accordingly, the statute should recognize this need for flexibility and direct the EPA to oversee the program in a non-restrictive manner.

6. There does not appear to be any funds specifically designated for state agency oversight and involvement with the planning process undertaken by local government. There is a need for additional state level funding for coordination, review, advice, data generation and other related activities. We urge inclusion of funding for these activities.

Specific Comments

1. Page 4, line 11 to page 5, line 7 [section 1412(b)(1)(C)(i)]. There needs to be a methodical approach to evaluating the myriad of substances which may be of potential concern. The periodic establishment or lists of priority substances to evaluate is a reasonable approach to this very difficult problem.

2. Page 5, line 24 to page 6, line 7 [section 1412(b)(2)]. We strongly recommend that each maximum contaminant level goal be established at some finite number rather than zero. This number should be related to some specified risk level. A zero number is not very useful when dealing with contamination in a specific well. Everyone recognizes that a zero level of contamination would be desirable. The MCL goal, however, should be based on an acceptable risk level without taking treatment costs and options into account.

3. Page 6, lines 13 - 25 [Section 1412(b)(4)]. We object to the requirement that the alternative treatment must be as effective as granular activated carbon (GAC). Other treatment methods such as air stripping, are capable of removing 98 to 99% of the contaminants in certain situations. Where a treatment can reduce a contaminant below an MCL there should not be a prohibition on its use. It appears that would contradict the reasoning for establishing MCLs.

4. Page 9, line 20 to page 10, line 5 [section 1412(b)(6)(D)]. This section would require disinfection as a treatment technique for all public water systems with provisions for variances from this requirement. We currently require groundwater systems which have had problems or have a high potential for contamination (such as shallow wells or wells in limestone), to chlorinate the water. All surface water systems must provide full treatment. We feel it is a "make work" effort to have a requirement applicable to all systems and then have to consider a multitude of variances. A more straight forward approach, which would require significantly less administrative time, would be to establish criteria under which chlorination would be required. Additionally, there is a feasibility problem for small water systems having pitless adapter well installations. There is no good trouble free method for chlorinating these types of installation. Given the limited nature of plumbing systems and impracticality of installing chlorinators on non-community water systems, we believe that if a general chlorination requirement is included in the legislation, it should be only applicable to community and preferably municipal water systems.

5. Page 10, line 25 to page 11, line 4 [section 1414(a)(1)(B)]. While we concur that the EPA should have authority to issue orders to affect compliance, we believe this section should be permissive rather than mandatory. In many circumstances the EPA will determine that the current action being undertaken to achieve compliance is appropriate and that no order is necessary. In addition, the 30 day time period is unreasonably short when considering legal proceedings.

6. Page 14, line 21 to page 15, line 11 [section 1415(a)(1)(A)]. It is not appropriate to limit variances to systems which have already applied the best available technology. EPA will never be able to cover every possible circumstance in determining whether a system has applied best available technology. There will always be some circumstances where a system legitimately cannot comply and a legal mechanism such as the variance needs to be available.

7. Page 17, line 20 to page 18, line 5 [section 1445(a)(2)]. Mandatory monitoring of unregulated contaminants should be limited to community water systems. While this monitoring may be feasible for the 1300 community water systems in Wisconsin, it is impossible and unnecessary to expand the monitoring to more than 13,000 non-community water systems in Wisconsin. Most contaminants are of concern during a lifetime of exposure and the one time or intermittent exposure to the public at non-community water systems does not warrent the proposed sampling. Further, EPA should be required to publish a health advisory limit for each contaminant for which monitoring is required. If the contaminants are found, this information must be available.

8. Page 19, line 11 to page 20, line 23 [Section 1442 and 1432]. We strongly support the technical assistance to small water systems and tampering provisions provided in these portions of the legislation.

9. Page 24, lines 11 - 18 [Section 1423(a)(1)]. See comment #5.

10. Page 28, lines 12 - 14 [Section 1428(c)]. Change the word "plan" to "application". The Governor should certify that the application is consistent with state laws, regulations and policies and that the Governor supports the application.

11. Page 30, lines 6 - 11 [Section 1428(e)(D)]. This section should be omitted. This concept of assimilative capacity is not appropriate when related to the groundwater resource. Further, this section promotes the concept of no growth-no change which should be resisted.

12. Page 30, line 21 [Section 1428(e)(G)]. Replace "adequate" with "an assessment of the adequacy of".

13. Page 30, line 23 to page 31, line 3 [Section 1428(e)(H)]. This section is not clear as to its intent. It should either be omitted or rewritten to be more specific.

14. Page 31, lines 4 - 10 [Sections 1428(e)(I) and (J)]. What is envisioned by a "transfer credit system"? We suggest that these sections be omitted since it appears that whatever was envisioned would be inappropriate for a local plan.

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Comments by the Wisconsin Department of Natural Resources on
S. 24 "Sole Source Aquifer Protection Act of 1985"

General Comments

1. The existing Safe Drinking Water Act (SDWA) and attendant regulations indicate that protection of groundwater is to be afforded to only that groundwater which is or may be expected to supply drinking water for public water systems. We strongly suggest that the coverage be broadened to include and assure protection for all groundwater, not just that serving public water supplies. Subsection 1421(d)(2) of the SDWA should be amended to accomplish that.

2. The planning process established in S. 24 would only be applicable to areas designated as a sole or principal source area [page 4, lines 1 to 5; section (d)(1)]. Wisconsin currently does not have any areas so designated. Further, the concept of planning to assure protection of groundwater resources should not be limited to sole or principal source areas. Protection of the groundwater resource should be encouraged in all areas of existing or potential groundwater use. We encourage the broadening of the proposed statute to allow the planning process to proceed under the terms of the statute in any area approved by the Governor.

3. Any planning to be done must be flexible in order to address area specific needs. While there is a need for the federal government to specify some minimum criteria, this should be done with the recognition that in the past, planning done under federal mandate and to federal specifications has often not been very useful. Accordingly the statute should recognize this need for flexibility and direct the EPA to oversee the program in a non-restrictive manner.

4. There does not appear to be any funds specifically designated for state agency oversight and involvement with the planning process undertaken by local government. There is a need for additional state level funding for coordination, review, advice, data generation and other related activities. We urge inclusion of funding for these activities.

Specific Comments

1. Page 4, lines 2 - 3 [Section (d)(1)]. In addition to municipalities, a state groundwater management agency should be able to petition the Governor to designate a special protection area.

2. Page 4, lines 17 - 25 [Sections (d)(2)(B) and (E)]. The issues requiring evaluation are extremely subjective and would be very difficult to support with hard data. These sections might better be omitted from the proposal.

3. Page 5, lines 8 [Section (e)(2)]. The words "or, if necessary, establish" should be omitted. The term "designate" is sufficient here since state laws on establishment of government entities would be applicable.

4. Page 5, lines 14 to 16 [Section (e)(3)]. The Governor should not establish technical and citizen advisory committees or hold hearings. These functions should be the responsibility of the designated planning agency.

5. Page 7, line 24 to page 8, line 3 [Section (g)(1)(C)]. This section should be omitted. The planning agencies should not recommend or establish local groundwater quality standards. This is a function of the state. The plan should be developed to meet or exceed the state standards.

6. Page 8, lines 6 - 8 [Section (g)(1)(E)]. This section should be omitted. This concept of assimilative capacity is not appropriate when related to the groundwater resource. Further, this section promotes the concept of no growth-no change which should be resisted.

7. Page 8, lines 12 - 18 [Section (g)(1)(F)]. This section is not clear as to its intent. It should either be omitted or rewritten to be more specific.

8. Page 8, lines 19 - 22 [Section (g)(1)(G)]. This section should be omitted. It seems to be redundant with page 8, lines 23 to 25.

9. Page 9, lines 1-7 [section (g)(1)(I) and (J)]. What is envisioned by a "transfer credit system"? We suggest these sections be omitted since it appears whatever was envisioned would be inappropriate for a local plan.

10. Page 9, lines 22 - 23 [Section (g)(2)(B)]. State agencies should be added as receiving copies of the draft and final plans for review and comment.

11. Page 10, lines 1-3 [Section (g)(2)(D)]. See comment # 4. The Governor should not establish these committees.

12. Page 10, lines 12 - 13 [Section (h)]. Add "or approved conditionally".

13. Page 10, lines 19 - 22 [Section (h)(2)]. This section should be omitted. Groundwater protection is not the sole objective of zoning. This section is too restrictive.

14. Page 11, lines 3 - 10 [Section (h)(4) and (5)]. These sections should be omitted. It is not necessary for a "plan" to contain this level of assurance of implementation just for the plan to be adopted.

15. Page 11, lines 11 - 13 [Section (h)(6)]. Substitute the present wording with "whether management entities have been designated, pursuant to state law, to implement the plan.

16. Page 11, line 21 to page 12, line 2 [section (i)(1)]. Consultation with the Secretary of Defense is acceptable. However, the statute should require the Defense Department to implement groundwater investigations and clean up if a showing is made that the groundwater has been contaminated. The Defense Department should not be able to avoid addressing a problem because of a claim related to a national defense mission.

TESTIMONY ON
SENATE BILL 124,
"SAFE DRINKING WATER ACT AMENDMENTS OF 1985"

PRESENTED BY:

THE ASSOCIATION OF STATE DRINKING WATER ADMINISTRATORS

(ASDWA)

1901 N. FORT MYER DRIVE
ARLINGTON, VA 22209

PRESENTED TO:

SENATE ENVIRONMENT AND PUBLIC WORKS COMMITTEE

SUBCOMMITTEE ON DRINKING WATER

MARCH 21, 1985

TESTIMONY BY

THE

ASSOCIATION OF STATE DRINKING WATER ADMINISTRATORS

ON

SENATE BILL 124,

"SAFE DRINKING WATER ACT AMENDMENTS OF 1985"

The Association of State Drinking Water Administrators (ASDWA) welcomes this opportunity to provide the Subcommittee with our views on the Safe Drinking Water Act Amendments of 1985. The Association is a new organization of state drinking water program managers organized to better communicate with congressional committees, the EPA, water utilities, the general public, and all other persons interested in drinking water. We would welcome the opportunity to meet with congressional committees and staff as opportunities present themselves to share with you the concerns and the views of those persons who have the responsibility of implementing the Safe Drinking Water Act across the country. The ASDWA strongly supports the reauthorization of the Safe Drinking Water Act as proposed by Senate Bill 124.

We endorse the need for EPA to promulgate drinking water standards for volatile organic chemicals (VOCs). It is critical with a subject such as this that the drinking water standards be developed fully, utilizing th best available scientific information. It is equally important that VOC standards be consistent across the country. With the slowness of the adoption of regulations through the Environmental Protection Agency, several states have been, and are continuing, to be pressured to promulgate drinking water standards on volatile organic chemicals at the state level. At least one state (Florida) already has promulgated such standards. This will ultimately lead to a variety of standards across the country and will further confuse an already complex subject. It is essential the standards be

based on good science and promulgated as soon as adequate science is available.

It is proper that the provisions for public notification be modified since the Administrator and the primacy agencies need flexibility to address health related violations strongly and quickly as differentiated from administrative violations of the rules. We are confident that public notification, when provided basically for health related violations, will be much more meaningful and better received by the general public than if the health notifications are confused with notices for administrative problems experienced by the utility as is now the case.

The ASDWA strongly supports filtration of all surface water supplies and groundwater sources which are not properly protected from potential contamination. History has shown that this type of treatment is accessible and generally available to municipal supplies and has been since the turn of the century. A few of the larger utilities still operating public water supplies with surface sources without the benefit of effective filtration say they cannot afford to install this treatment capability. This is surprising because many smaller utilities which do not possess the funding capabilities of large utilities have found such treatment entirely feasible. If small communities across the country can plan, fund, and construct treatment facilities to provide for effective filtration, the large utilities can also meet this need. The ASDWA suggests the question should not be whether or not all utilities using surface water should provide effective filtration -- they should. Rather, we recommend that all surface water supplies be required to have effective filtration of their drinking water <u>before</u> it is distributed to the public. Flexibility can be provided by allowing the primacy agency to develop a compliance schedule for each community involved with more time allowed for those utilities with higher quality raw water. This approach would allow the utility to plan for necessary construction and to develop needed financing capabilities into the overall management of their system.

Whereas ASDWA supports in principle legislative provisions requiring mandatory disinfection of all sources, the Congress should be aware that implementation of such a provision could impose a burden on state primacy agents since it would be a time intensive task. ASDWA believes that states should not have to provide documentation to EPA for each individual water system when variances are granted. Rather, we feel that documentation to support decisions could be provided to EPA for groups of supplies (i.e., protected ground water supplies). Thus, we support modification of the language in the Senate Bill to provide flexibility by the states in providing documentation to support variance decisions on individual systems.

The question of whether there should be RMCLs and MCLs for various contaminants continues. It is somewhat confusing to many people to have two numbers for each of the various contaminants covered under the drinking water standards. State programs suggest there be only one number promulgated through the federal bureaucracy, that being the enforceable MCLs. The current process is making the standard promulgation process extremely tedious. EPA has labored for months and still has not managed to promulgate RMCLs for nine volatile organic chemicals. This bodes ill for timely promulgation of enforceable MCLs. The joint promulgation of RMCLs and MCLs would be an improvement over the current situation, but we question the need for having the two numbers promulgated for each contaminant. We feel that promulgation of RMCLs is unnecessary.

It does not seem appropriate or necessary to list individual types of treatment as generally available technology within the law. We would suggest that the waterworks community including utilities, consultants, manufacturers, and regulatory agencies have more than enough expertise to determine the availability of various types of treatment to meet certain goals or limits. By listing one or two of available treatment techniques (i.e., granular activated carbon), the regulatory community may prejudice

the utility or the consultant as to the types of treatment to be considered. The reference in the Bill to a treatment technique such as granular activated carbon should be deleted, leaving that decision to the professionals in the public water supply programs to determine. In this way, the Act will not be outdated as more and more "generally available treatment" technologies are developed.

In regulating the drinking water industry the states have found that, in rural and small systems, the hard core enforcement activities rapidly reach the point of diminishing returns. We also have found that on-the-job training (OJT) or technical assistance is often more effective than some enforcement activities. However, OJT and technical assistance are manpower intensive functions. The existing state program grants do not permit these functions since the grants have decreased while the primacy functions have increased. Therefore, through this association, the states strongly support the provision of resources for the technical assistance function and applaud your recognition of this basic need.

Once drinking water is properly treated, it goes to a storage reservoir. Most states require "covered" storage reservoirs but there are many communities, even metropolitan areas, served by uncovered reservoirs. This is usually because the practice preceded state regulations, thus making enforcement difficult. It really makes little sense to properly treat drinking water, then violate the integrity of a closed system by allowing contaminants to come into contact with the finished water. The states, through this association, strongly encourage the Senate to look at the merits of requiring covered storage reservoirs on all public water supply systems.

The ASDWA would like to comment on one other aspect of the reauthorization Bill. The provision of adequate program grants to state primacy agencies to carry out the implementation and enforcement of the Safe Drinking Water Act is essential.

Most state programs have suffered badly from budget problems during the last few years, and the decreased staffing can do nothing but detract from the efficient implementation of the entire Safe Drinking Water Act. As program staff capabilities decrease, state programs have no alternative other than to become more legalistic in their approach to implementation of the program. This results in costly legal actions and delays the implementation of an effective program. Where state programs currently have adequate staff, they are able to see problems developing and resolve those problems before they become a threat to the public health of a community. This is a much more equitable and non-confrontational method of implementing the public water supply program. If additional responsibilities are to be placed on an already overburdened regulatory community, the funding must be made available to support the activities of the primacy agencies. We recognize this is a matter that must be addressed not only in the reauthorization Bill, but in the annual appropriation bills for EPA programs. State programs have every desire to cooperate with Congress and EPA in fully implementing the Safe Drinking Water Act, but to do this primacy agencies must be adequately staffed in order to work with the utilities and to assure the provision of adequate supplies of high quality water to the general public.

We appreciate the opportunity of providing this testimony to this Senate Subcommittee. As the regulatory agencies primarily responsbile for implementation and enforcement of the Safe Drinking Water Act, we would be more than pleased to meet or confer with the Subcommittee or its staff to elaborate and expand on certain areas of our comments or to discuss other areas in which you may have questions. Please let us know if we can provide you with any further information.

CHEMICAL MANUFACTURERS ASSOCIATION

STATEMENT OF

FREDERICK W. STEINBERG

ON BEHALF OF THE

CHEMICAL MANUFACTURERS ASSOCIATION

BEFORE THE

SUBCOMMITTEE ON TOXIC SUBSTANCES

AND

ENVIRONMENTAL OVERSIGHT

COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS

UNITED STATES SENATE

ON

REAUTHORIZATION OF THE

SAFE DRINKING WATER ACT

JULY 28, 1982

2501 M Street, NW • Washington, DC 20037 • Telephone 202/887-1100 • Telex 89617 (CMA WSH)

Good morning, Mr. Chairman and members of the Subcommittee. My name is Frederick W. Steinberg. I am Senior Attorney with PPG Industries, Inc. in Pittsburgh, Pennsylvania. With me today is Mr. Alan Egler, Technical Services Engineer with E. I. DuPont de Nemours & Company, Wilmington, Delaware. I am speaking today on behalf of the Chemical Manufacturers Association (CMA). CMA is a nonprofit trade association whose company members represent more than 90% of the productive capacity of basic industrial chemicals within this country. Mr. Egler and I are both members of CMA's Ground Water Management Task Group.

Assuring a safe and adequate supply of drinking water is, and should be, one of the highest national priorities. CMA supports the goal of the Safe Drinking Water Act -- "to assure that water supply systems serving the public meet minimum national standards for protecting public health." Further, CMA believes that the SDWA has made significant advances toward meeting this goal.

Reauthorization of the SDWA provides the opportunity to review the progress that has been made to date in safeguarding the quality of drinking water and to make necessary mid-course adjustments to improve the Act's application and enforcement. In addition, reauthorization provides an opportunity to discuss ground water management and efforts the Chemical Industry is making in this regard.

Today I will address two proposed legislative amendments to the SDWA -- the "Safe Drinking Water Regulatory Reform Act"(S.1866) and the "Sole Source Aquifer Protection Act of 1982"

(S.2131). In addition I would like to discuss CMA's view of managing ground water as a resource and the respective federal and state roles associated with this effort. We believe there is a need for comprehensive ground water management that can protect public health and the environment, while responsibly maintaining multiple uses of the resource.

CMA supports many of the specific amendments proposed in the "Safe Drinking Water Regulatory Reform Act", S.1866. However, CMA is concerned with the scope of the "Sole Source Aquifer Protection Act of 1982". The proposed act (S.2131) may institute federal "back door" land use control, establish a no-growth policy, and inappropriately include surface water management.

We believe a national ground water policy is needed which requires federal environmental laws covering ground water to be administered in a consistent fashion. In addition, CMA concludes that ground water must be managed to prevent adverse impacts to human health and the environment. However, we do not see any need for additional federal legislation at this time. We are developing a concept of managing ground water whereby comprehensive State Ground Water Management Plans would be developed. The management approach embodied in such plans should include classification of ground waters based on existing and future uses.

I will first address CMA's view of overall ground water protection.

CHEMICAL INDUSTRY OVERVIEW OF GROUND WATER PROTECTION

Ground water is important to the Chemical Industry as well

as many segments of society. We recognize that ground water is an important natural resource which contributes significantly to the environmental and economic well being of our nation. We also recognize the potential for chemically and biologically contaminated ground water to adversely affect health and damage the environment.

At many chemical industry plant sites certain uses of ground water are vital to manufacturing activities. These uses include water for cooling, processing and drinking water supplies which must meet certain plant specifications as well as regulatory requirements. Our industry must assure that plant operations do not impair the use of ground water for these plant purposes and for other uses outside plant boundaries. These "other uses" of ground water outside plant boundaries may be vital to the local community or the state.

The Congress and the states have similarly recognized the importance of ground water, and as a result there are numerous statutes and regulatory programs with which the chemical industry must comply.

For all these reasons, CMA member companies have recognized the importance of addressing ground water policy issues in a systematic way. Consequently, in March of 1980 a Ground Water Management Task Group composed of representatives of several member companies was formed within CMA. The group's goal is to participate in the regulatory and legislative processes and to provide a forum for furthering the understanding of the resource. Members of this group participated actively in the EPA Ground

Water Workshops in June 1980, and have maintained close contact with the Agency's activities on this issue.

CMA recognizes that added emphasis on education of both member companies and the public sector is important. For example, CMA has published and is preparing additional reports explaining ground water technical and management fundamentals and their relationship to the development of a national policy.

CMA believes scientifically well-balanced ground water policies which establish reasonable goals and suggest management strategies and technical options are a vital foundation for a collective national effort to protect public health and the environment. In this regard, we see the relationship between federal, state and local interests to be particularly important.

The federal role should be to assist states in developing ground water management plans and offer technical assistance when requested. In this classification process, the states would rely heavily upon state geological agencies and state and local planning entities for specific information and advice. To address state and federal ground water management roles in greater detail we are submitting for the record memoranda from the law firm of Davis, Graham and Stubbs prepared for and submitted as part of CMA's testimony on the EPA proposed National Ground Water Protection Strategy, January 30, 1981.

I. CMA Recommendation for Managing Ground Water

CMA began work on the ground water issue knowing that society's uses of ground water had, in some cases, changed its quality or quantity. CMA concluded that ground water must be

managed to prevent adverse effects on the many valuable uses of ground water. By use, we mean not only withdrawal of ground water, but any activities which may impact ground water.

CMA is developing a concept of ground water management through classification according to existing and future uses. We are still seeking input from other public and private experts. Although we do not intend to present this concept as either a panacea or as "set in concrete", CMA believes this concept offers several advantages that I will discuss this morning.

CMA expects to participate in continuing discussions throughout what we hope will be a thorough public examination of ground water management alternatives.

A. GROUND WATER CLASSIFICATION BY EXISTING AND FUTURE USES

CMA strongly believes that the most practical and technically feasible approach to ground water mangement is a state administered management system which employs use-classification as the basis for preserving ground water's multiple uses. The federal government's role in this system would be to assist States in developing Ground Water Management Plans by providing information and technical assistance. The federal government should also harmonize existing environmental programs that may affect ground water. CMA understands that the latter effort is receiving serious study at EPA.

The multiple use classification system offers perspectives and practical advantages not available under other proposals. First, CMA believes it is fundamental that the multitude of ground water uses be acknowledged if we are to more effectively

manage and protect this resource. Other systems that would classify ground water as if it were to be reserved for a single use (e.g., drinking water), irrespective of actual use or need, fail to account for the fact that ground water differs in utility, depending upon local needs and geologic setting. Such systems would curtail other essential ground water uses or other productive human activity, without any demonstration that the presumed use would match the actual need.

One of the most important advantages we see in classifying ground water by use, is the ability to protect certain ground water for future drinking water supplies. As part of the classification process, a determination should be required that future drinking water supplies are fully adequate before allowing ground water of drinking water quality to be used for another purpose.

A use-based classification system provides individuals responsible for managing ground water with a basis for planning and taking action. Those who utilize ground water by withdrawal or otherwise affect ground water must be responsible for the protection of the resource within its classified purpose. For example, chemical manufacturing should be permitted above an aquifer classified for drinking use provided that environmental protection measures will be effective in preventing impairment of this designated use of the aquifer. Thus, this approach does not imply that the constituents found in classifed ground water will remain at the same concentration or decrease in concentration. Rather, a classification system would ensure that the amount and

type of man induced constituents in the ground water do not cause the clasified use to be impaired.

Another advantage of a use-based classification system is that it can be responsive to new or changing uses. Only ground water currently in use or reasonably shown to be needed for a specific purpose in the future need be classified. Other ground water without identified uses would remain protected and should be left unclassified until a need arises. In this way, ground water supplies for new uses can be provided and the management system can adjust to shifting ground water needs over time.

B. INFORMATION NECESSARY TO CLASSIFY GROUND WATER

Establishing a sound information base is an important first step in a use classification system. The system CMA is developing offers a very real advantage in its reliance upon largely existing data available from federal and state agencies such as the United States Geological Survey, the Water Resources Council, United States Environmental Protection Agency, State Geological Surveys, and documents such as area-wide water quality management plans developed pursuant to Section 208 of the Clean Water Act.

In beginning the process of classifying ground water, at least the following data would be considered: existing uses of ground water; the geological/hydrological setting (information on soil, rock, ground water quality and quantity, flow direction and rate, recharge, seasonal variation, yield, and regional hydrology); alternative water supplies; and projected population growth and use patterns. Existing information of this kind can

be used by each state to build an expandable foundation.

C. POSSIBLE GROUND WATER CLASSIFICATION

As the classification effort proceeds at the state level, many use classes would be needed to reflect the many potential uses of ground water. Let me list an abbreviated set of uses.

- o Agriculture
- o Business: Industrial
  Commercial
- o Consumptive Use with Limited Waste Discharge
- o Mining and Energy Development
- o Drinking Water including:
  - Sole Source
  - Public
  - Private
- o Municipal
- o Waste Management

Additional classes could, of course, be devised when necessary to reflect local ground water needs. CMA recommends that the public have an opportunity to comment on all draft State Ground Water Management Plans, including the classification system.

To demonstrate the feasibility of our proposed ground water classification system, CMA will soon complete a project showing how a use-based ground water classification system can be implemented. The full report resulting from this project will be very broadly distributed, in approximately three months.

II. SPECIFIC COMMENTS ON S.2131

A. FEDERAL LAND USE CONTROL

We believe there is a real need for assistance to states for development of ground water management systems. These management systems would include sole source aquifers and protection of critical ground water recharge areas. However, S.2131 does not fulfill this need. By imposing a number of restrictions before a state may receive financial aid, the proposed amendment has the effect of authorizing federal control over state and local land use. Land use control traditionally has been a prerogative of state and local government. We believe this should not be changed.

When the Act was first introduced, the sponsor of the bill stated that it was not his intent to "involve the federal government in local land use decisions." It should be noted, however, that the proposed amendment does establish a federal approval process which releases funds for the implementation of what amounts to "back-door" federal land use control.

Following are some excerpts from S.2131 which lead to that conclusion:

- Paragraph (g) (1) calls for preparation of a comprehensive plan which embodies as the guiding management principle protection of the recharge area through "..maintenance, to the maximum extent possible, of the natural vegetative and hydrogeological conditions." This maintenance requirement may have special relevance as a prime management option for the Long Island situation. However, it is highly

questionable whether such a requirement can be regarded as the only effective approach to recharge area management in other parts of the country.

- Sub-paragraph (g) (1)(G), a required element of the plan which must be submitted to the federal government, includes "...a comprehensive statement of land use management as it pertains to the maintenance and enhancement of ground water quality and quantity." On its face, this statement reflects federally funded and approved land use management.
- Sub-paragraph (g) (1) (H), another required element of the plan, calls for "...limits on land uses in the Special Protection Area which might have an adverse impact on water quality and/or recharge capabilities." This constitutes federally approved regulation of activities within the special protection area.

No single management approach such as land use control can satisfy all interests and situations impacting ground water across the country. Thus, a single Congressionally mandated management approach is inappropriate. Policies for ground water management must recognize the existence of multiple uses and that a variety of local control options can protect designated ground water uses, including drinking water.

B. NO-GROWTH POLICY

The guiding principle of the bill's comprehensive management plan is that it "...shall be designed to maintain the quality of the ground water recharged through the special protection area through maintenance, to the maximum extent possible, of the

natural vegetative and hydrogeological conditions." (Emphasis added) This principle clearly would prohibit growth and development in designated critical aquifer recharge areas. If broadly applied, this could extend a federal no-growth policy to large portions of the country.

C. SURFACE WATER MANAGEMENT

Sub-paragraph (g) (1) (E) of the bill requires "a resource assessment which suggests the amount, location, and type of human development and activity which the ecosystem can sustain while still maintaining existing ground and surface water quality..." (Emphasis added). This resource assessment is obviously much broader in scope than a study relating to ground water quality impacts. To include surface water quality is not only an ambitious and potentially resource intensive undertaking but infringes on existing authorities for managing surface waters, including the Federal Clean Water Act.

III. "SAFE DRINKING WATER REGULATORY REFORM ACT"

A. PEER REVIEW OF EPA'S SCIENTIFIC DETERMINATIONS SHOULD BE ADDED TO THE SAFE DRINKING WATER REGULATORY REFORM ACT.

Under the SDWA, EPA is directed to promulgate drinking water regulations and publish proposed regulations for state underground injection control programs. The collection and the careful evaluation of scientific information and data are critical to the development of sound regulation. To insure that the evaluation process is an objective one, it is essential that there be an independent scientific review of the data on which regulatory decisions are made.

CMA recommends the creation of an independent Science Advisory Board to evaluate the scientific data on which EPA bases its regulatory decisions under the SDWA. In order to insure objectivity of its review, the board should not be appointed by EPA. The Board's mandate would be solely to review and analyze the data used by EPA in making regulatory decisions. This is particularly necessary where data are incomplete and are subject to different interpretations. In its review, the Board should point out areas that are inadequate or need to be revised. In proposing a new or revised decision, EPA should be required to justify any failure to follow or respond to the review board's recommendations.

The independent peer review by the Board would take place after EPA's required Section 1412 consultation with the National Drinking Water Advisory Council and the execution of funded contractual arrangements for the various studies required by law from the National Academy of Sciences.

B. AFTER BEING ISSUED, SNARLs (SUGGESTED NO ADVERSE RESPONSE LEVELS) SHOULD BE SUBJECTED TO SCIENTIFIC PEER REVIEW AND IN SOME INSTANCES, FORMAL RULEMAKING PROCEDURES.

SNARLs (Suggested No Adverse Response Levels) are health advisories issued by EPA on unregulated contaminants, usually as an emergency response to very high exposure levels associated with an episodic event. CMA concurs with the concept of developing SNARLs as health advisories, where appropriate, for emergency situations. We are concerned, however, with the subsequent misuse of SNARLs. A disturbing trend is for states to

'adopt' SNARLs as a basis for regulation even though they are intended only as a health advisory.

There have been numerous examples where EPA's advisory opinions (SNARLs) have been used by the states as maximum contaminant levels (MCLs). Although many states are authorized to do so, such a practice has the effect of establishing SNARLs as a "national regulation" without formal rulemaking by EPA.

In order to remedy the past and potential future misuse of SNARLs, CMA suggests the following changes in the SDWA. SNARLs should continue to be issued as an initial response to an emergency situation such as a major spill, or in response to a given request by an affected state. However, following their issuance, they should be subjected to scientific peer review in accordance with the procedure previously suggested. If there is a reason to apply SNARLs to more than a few local emergency situations resulting from isolated incidences, EPA should subject SNARLs to a formal rulemaking procedure, thereby converting them to nationally applicable drinking water regulations.

C. UNDERGROUND INJECTION CONTROL PROGRAM (UIC)

Legislative change in the UIC program is unnecessary at this time. CMA is very much interested in the UIC program. However, certain substantive changes were made in the UIC portion of the SDWA in 1980. In view of the foregoing, any legislative changes at this time would be premature. The UIC regulations revised pursuant to the litigation settlement should be given a chance to be implemented and their effects evaluated.

D. NATIONAL DRINKING WATER ADVISORY COUNCIL SHOULD INCLUDE INDUSTRY REPRESENTATION

Section 1146 (a) of the SDWA provides for a National Drinking Water Advisory Council (NDWAC) consisting of fifteen members appointed by the Administrator. CMA supports the proposed amendment to increase the NDWAC to sixteen members. We believe, however, that the member distribution of those appointed from the general public should include at least two representatives from industry.

Industry has expertise in this area that has not been utilized in the past. Inclusion on the council would allow industry to play a constructive role in addressing problems at an early stage in the review of the regulatory process.

Comments on Senate Bill S124
by
Conference of State Sanitary Engineering
March, 1985

The Conference of State Sanitary Engineers appreciates having this opportunity to comment on Bill S124, and requests that these remarks be made part of the record.

Bill S124, the Safe Drinking Water Act Amendment of 1985, contains some changes which will be of great benefit to the public water supply program. However, it also contains changes which will work against improvement of the program, and its aim, providing safe drinking water. Also, most of the changes do not refer to non-community supplies. This should be made clear.

Section 2 of the Bill changes the present interim primary drinking water regulations to primary drinking water regulations, without any review of the appropriateness of the standard in view of current knowledge. For example, the interim standards for selenium, barium, radium, alpha radioactivity, and fluoride are all questionable. Under the current statute these will be reviewed before becoming permanent standards. The proposed amendments will make this review unnecessary, and therefore it probably will not be carried out.

Setting the removal qualities of granular activated carbon as the standard by which other methods of removal of volatile synthetic organic chemicals are judged is unwise, because of some of the characteristics of this type of carbon. For example, it may serve as a "balance wheel", holding the level of a substance at a specific range of values by removing higher levels down to that range, and putting back into the water some of the substance when the incoming levels are lower. In addition, the granular activated carbon when

overrun will put back the material in larger quantities than in the incoming water, thus increasing any risk which may be present. The removal efficiency of any method should be based on an absolute standard rather than on granular activated carbon.

We support the requirement for filtration. It is known that pathogens such as giardia lamblia will not show up in the routine bacteriological tests, or are not effectively inactivated or removed by chlorination, and can be removed only by proper filtration or more complete treatment which includes filtration.

Section 3 of the Bill appears to indicate that the aim of the program is enforcement rather than compliance. Enforcement actions may in fact delay compliance, since an adversary situation will be set up during which the public water supply not in compliance will take no action which would jeopardize its case. This may very well include correction of the deficiency. The deficiency will consequently continue, and the movement of the case through the courts may take a tremendously long time. In addition, most of the public water supplies which are not in compliance are small or very small, and the legal representative of the primacy agency, whether he is called an attorney general, district attorney, or states attorney, or any other name, is usually extremely reluctant to spend time on such a small case. Therefore, even though the primacy agent may be willing to bring a case or, as in the case of this proposed change, feel required to bring such a case, he very frequently cannot get the legal representation to take the case to the courts. A requirement such as proposed will exacerbate the situation.

This may well result in a further decrease in the willingness of the legal representative to carry cases to court. Furthermore, enforcement actions tend to incite the public water supply owner, for small supplies, to discontinue service. The people served then must obtain their own wells, which generally are not as safe as wells from public water supplies due to poor construction or location near sources of contamination. It therefore is much more advisable not to set strict time limits, but to base enforcement actions on the willingness or ability of the non-compliant to correct the situation. Where it is obvious that there will be no corrective action taken, enforcement should be prompt. Where there is a reasonable chance that compliance can be obtained, enforcement should be withheld.

The changes to the public notice requirements are long overdue, and are welcome. As the law now stands, public notice for insignificant violations, such as submitting analyses for 149 samples when 150 are the technical minimum requirement, is ridiculous. Allowing the primacy agent discretion is a desirable improvement.

Section 5(a) of the Bill makes a very undesirable and detrimental change to the Safe Drinking Water Act. What this says in effect is "we do not care how much scientific and engineering knowledge there is to show that a process will not work. We wish to return to the dark ages where everything is done by trial and error. We do not care how much money will be wasted in installing and operating the equipment even though it is known that it will not work. Sorely needed money must be taken from some other source for this wasteful operation in order to get a variance." Where there is reasonable indication

that the condition cannot be corrected by the installation of equipment, such as when collodial barium sulfate is present and the use of an ion exchanger is required, it is unreasonable to waste money to install the equipment before the variance can be granted. The inability of ion exchange to remove this compound is as well known as the fact that the sun rises in the east. This particular change is the major defect of S124. It will create more problems than it solves, and may very well result in defiance of the Safe Drinking Water Act and Regulations promulgated under it.

The remaining paragraphs of this section generally acceptable.

In the changes to Section 1445(a), under subparagraph (6), apparently the Adminstrator will pay for the analyses of water samples provided by public water supplies serving less than 150 service connections. However, some states now do all analyses for water supplies without charge. The Bill is not clear whether the Administrator will reimburse the states for these analyses for the small water supplies. If not, the states will be severely hampered since they do not now have adequate resources for their existing programs and, if they must provide the additional generally expensive analyses without charge to the public water supplies, the existing programs will have to be decreased. The bill should be clarified to show that payment for these analyses will be made regardless of whether the state performs the actual analysis or whether it is done by a private laboratory.

The addition to the law providing penalties for tampering with public water supplies, given in Section 9 of the Bill, is an excellent step. While some states have equivalent legislation, many do not and, for various reasons, would not pass such legislation. The national requirement set forth in this section is a welcome one.

The addition to Section 1426(a) is a good one, except that the prohibition of underground injection within one quarter mile of a well used as a drinking water source is an oversimplification. One quarter mile should be the minimum distance where all other aspects are favorable. However, each site should be examined for its geological and hydrological condition before a distance requirement is set. For example, if material being injected underground can enter a fractured limestone formation, it may show up many miles away. Therefore, each case should be examined before underground injection is allowed, with one quarter mile being the minimum distance to a drinking water source.

The enforcement provision for underground injection, as in Section 11(a)(1) carry the same problem as previously stated for the changes to Section 1414(a)(1)(B). Since they have already been discussed above, they will not be repeated here.

We wish to mention particularly that the addition of administrative orders to the arsenal of enforcement can be an excellent one, if used wisely, in cooperation with the states. This will overcome some of the present problems in enforcement against small supplies. However, it must be noted that one of the common reactions of owners of small supplies, when threatened with enforcement, is to shut down the supply and require the people served to have their own wells. While this has been mentioned before, it is worth repeating since the private wells frequently are much less safe than the public water supply wells, either because of construction or location. Many private wells are close to or geologically downstream from the leach fields from septic

tanks, barns, feed lots, or other sources of contamination so that a fair proportion of the water they provide is septic tank or other contaminated effluent. This, in fact, is one of the major problems of small private wells. Every reasonable effort should be made to keep existing public water supplies in operation when the alternative is a smaller unregulated system or private wells.

With the exception of the deficiencies enumerated previously, this Bill is a good one, and provides some long overdue changes. It is hoped that the deficiencies will be corrected and the Bill then amended to the Safe Drinking Water Act.

For further discussion or information, please contact:

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Conference of State Sanitary Engineers
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RS:IMM:mgg0544e/8-12

EDWARDS UNDERGROUND WATER DISTRICT

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1.4-3.2.3

March 25, 1985

The Honorable Lloyd Bentsen
United States Senator
Room 703, Hart Building
Washington, D.C. 20510

Dear Senator Bentsen:

The Edwards Underground Water District is seeking assistance and support in preventing an unnecessary increase in federal spending in an area of local responsibility. Legislation has been introduced into both Houses of Congress that would affect the Edwards Underground Water District, the Edwards Aquifer and other sole source aquifers. The Bill is entitled "Safe Drinking Water Act Sole Source Aquifer Amendments of 1985" (H.R. 1038 and S. 24).

The Edwards Underground Water District is a political subdivision of the State of Texas created in 1959 for the purpose of conserving, protecting, and recharging the Edwards Aquifer. The Edwards Aquifer is a limestone aquifer located in south central Texas that serves as the primary water source for approximately one million people.

The Board of Directors of the Edwards Underground Water District adopted a Resolution opposing the proposed legislation on March 12, 1985. (Copy enclosed.) It is the position of the Edwards Underground Water District that there are existing agencies and regulatory mechanisms working to protect the Edwards Aquifer and that the proposed legislation would only encourage additional unnecessary federal expenditures and involvement in an area of local and state responsibility.

The District supports efforts to reduce federal spending and to return responsibility to local governments. We respectfully request your assistance in opposing the proposed "Safe Drinking Water Act Sole Source Aquifer Amendments of 1985."

Thank you for your efforts and consideration of this matter.

Sincerely,

Thomas P. Fox

Thomas P. Fox
General Manager

TPF:kb

Enclosure

RESOLUTION NO. 03-85-053

RESOLUTION OF THE BOARD OF DIRECTORS OF EDWARDS UNDERGROUND WATER DISTRICT OPPOSING THE PROPOSED "SAFE DRINKING WATER ACT SOLE SOURCE AQUIFER AMENDMENTS OF 1985," HOUSE OF REPRESENTATIVES BILL 1038 AND SENATE BILL 24, UNITED STATES CONGRESS.

WHEREAS, the Edwards Underground Water District is a political subdivision of the State of Texas created by the Texas Legislature in 1959 for the purpose of conserving, preserving, protecting and recharging the water in the Edwards Aquifer and associated limestone formations within the boundaries of the District; and

WHEREAS, the Edwards Underground Water District has conducted studies and monitored the water quality of the Edwards Aquifer since the creation of the District; and

WHEREAS, the Edwards Underground Water District, in cooperation with numerous federal, state, regional and local agencies maintains a continuing program of water quality monitoring; and

WHEREAS, the State of Texas through the Texas Department of Water Resources has adopted rules for the protection of the Edwards Aquifer; and

WHEREAS, the United States Environmental Protection Agency has designated the Edwards Aquifer as a "sole source" aquifer in accordance with the provisions of Section 1424 (e) of the "Safe Drinking Water Act of 1974"; and

WHEREAS, there has been introduced into both Houses of the United States Congress in 1985, legislation entitled the "Safe Drinking Water Act Sole Source Aquifer Amendments of 1985," the provisions of which would allow residents of designated sole source aquifer areas, including the Edwards Aquifer area, to petition the governor of the state to request financial assistance from the United States Environmental Protection Agency to prepare a comprehensive management protection plan for the recharge area of such sole source aquifer, and such a plan may include land use management requirements and the designation of specific areas appropriate for public acquisition; and

WHEREAS, the District recognizes that public acquisition of the Edwards Aquifer Recharge Zone would be prohibitively expensive because of the extensive size of the recharge zone, being over 1500 square miles in area; and

WHEREAS, the District acknowledges and supports the policy of the President of the United States and the present Administration to reduce federal expenditures and to return more responsibility for local matters to the state and local governments; and

WHEREAS, the proposed "Safe Drinking Water Act Sole Source Aquifer Amendments of 1985" would encourage and allow federal involvement and expenditures for protection of the Edwards Aquifer, which protection is a local and state responsibility;

NOW, THEREFORE, BE IT RESOLVED that the Board of Directors of the Edwards Underground Water District opposes the passage of the proposed "Safe Drinking Water Act Sole Source Aquifer Amendments of 1985" as currently drafted; and in any form with similar intent; and that the management of the District is authorized and directed to take necessary and appropriate action to convey the position of the Board of Directors on such proposed legislation to appropriate elected officials and to other interested persons.

PASSED AND APPROVED BY THE BOARD OF DIRECTORS OF THE EDWARDS UNDERGROUND WATER DISTRICT, THIS 12th DAY OF MARCH, 1985.

Robert C. Hamlett
Chairman
Board of Directors
Edwards Underground Water District

Charles W. Rothe
Secretary
Board of Directors
Edwards Underground Water District

ATTEST:

Debra S. Fuentes
Debra S. Fuentes
Assistant Secretary-Treasurer of the Board of Directors
Edwards Underground Water District

Environmental Action

1346 Connecticut Avenue, N.W. Suite 731 Washington, D.C. 20036 (202) 833-1845

News Release
Date: March 21, 1984

For more information, contact:
Alicia Culver (202)-659-9681

DEEPWELL INJECTION: A TOXIC TIME BOMB

Groundwater Threatened

One of the greatest threats to our nation's groundwater is the disposal of hazardous waste by underground injection. Nearly 60 percent, totalling 15.6 billion gallons is pumped into deepwells each year -- with dire consequences. "Underground injection is simply a toxic time bomb with a longer fuse," says Alicia Culver, Environmental Action's (EA) Hazardous Waste Specialist. It may be decades before leaks from deepwells show up in our drinking water, but the damage is often irreversible. "Underground injection may lead us into a false sense of security," says Culver.

According to research conducted by EA's Waste and Toxic Substances Project, there are numerous documented cases of groundwater contamination from underground injection. "Although there has been no systemmatic review of the failures at deepwell injection sites, we do know that at least three of EPA's priority "Superfund" sites were formerly deepwell operations," says Culver.

The hazards of underground injection are only now beginning to surface. But there's dramatic evidence this disposal method has already poisoned usable aquifers:

* Just this week, the Oklahoma Dept. of Health proposed to shut down a commercial deepwell operated by Chemical Resources Inc. after chemicals leaked from a ruptured casing and contaminated the Mississippian Formation;

* A commercial injection well operated by Browning-Ferris, Inc. has polluted the Chicot Aquifer, a major water supply in Louisiana;

* Groundwater contamination caused by U.S. Steel's deepwell operations in Birmingham, Alabama convinced state officials to ban underground injection across the state.

In response to crises, several states including Louisiana, Florida, Alabama, Tennessee, Kansas and California have moved to restrict the use of injection wells for hazardous waste disposal. The Kansas Secretary of Health and the Environment, Barbara Sabol recently concluded that "...in the case of the clean up of fluids at the NIES [Superfund] site there are other methods available for disposal that are more environmentally sound than underground injection..."

Despite industry assurances that only wastes with trace levels of contaminants go down deepwells, in many cases dangerous liquids are being injected:

* Dow Chemical injected more than 2.5 billion gallons of wastes from its Agent Orange production plant in Midland, Michigan before it shut down its deepwell operation last year.

* Kerr-McGee is proposing to inject toxic chemicals, heavy metals and even radioactive wastes into deepwells in Oklahoma;

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* The Ethyl Corporation injected ethylene dibromide (EDB) -- a known carcinogen -- into its brine disposal wells in Magnolia, Ark. and is currently seeking full permits to continue this practice.

* Waste Management, Inc. injected "leachate" from the cleanup of the Seymour, Ind. Superfund site into deepwells in Vickery, Ohio. "Deepwells are becoming part of the toxic merry-go-round," Culver contends.

Despite all the problems, the number of deepwell injection sites are expected to skyrocket. "Industries realize that underground disposal of hazardous waste is out-of-sight, out-of mind -- unlike landfilling which is visible to the public," notes Culver. New restrictions on landfills may also boost deepwell use.

Most hazardous waste sites are strictly regulated under the Resource Conservation and Recovery Act (RCRA). "But deepwells fall through the regulatory cracks," Culver points out. As a result, underground drinking water supplies remain vulnerable to contamination from this waste disposal practice. "The public is looking to Congress to protect them by strengthening the Safe Drinking Water Act," states Culver. Needed protections include:

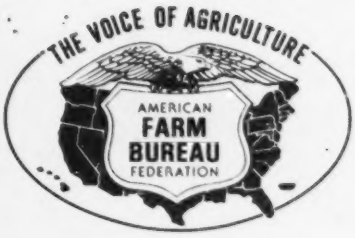
* Groundwater monitoring. State agencies have relied on monitoring of the annulus pressure to signal leaks at injection wells. But "these systems have failed us," concludes Culver. At Waste Management's six injection wells in Vickery, Ohio, 45 million gallons of waste leaked at a rate of 3 barrels per minute without notice by the monitoring system, according to a consultant's report.

* Restrictions on wastes injected. There are few limits on what can be pumped underground. Corrosive pesticide wastes at Velsicol's injection well in Beaumont, Texas "ate through two layers of steel and concrete to contaminate a fresh-water aquifer" according to Texas Dept. of Water Pollution reports. Acids can dissolve or fracture the supposedly impermeable confining layer protecting groundwater above. Incompatible wastes can build up pressure, causing explosions called "blow-outs".

* Financial assurances. There are currently no requirements for closure, post-closure care or corrective action beyond simple plugging of the wells. "Deepwell injection solves industry's liability problems, but not the public's pollution problems," claims Culver.

The real solution to our toxic waste crisis is waste reduction, recycling and reuse. "Industries need to detoxify their waste, not inject it into the veins of the earth," Culver insists. The Safe Drinking Water Act does not force industries to investigate safer treatment methods before applying for a deepwell injection permit. "A ban on deepwell injection of hazardous waste would be a good first step toward adopting safer waste management options and protecting our nation's vital groundwater," Culver concludes.

# # #



★ FARM BUREAU ★

** the nation's largest general farm organization **

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION
TO THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
REGARDING REAUTHORIZATION OF THE SAFE DRINKING WATER ACT

MARCH 21, 1985

American Farm Bureau Federation
Washington Office — 600 Maryland Ave., SW, Washington, DC 20024. Phone: (202) 484-2222

STATEMENT OF THE AMERICAN FARM BUREAU FEDERATION
TO THE SENATE COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
REGARDING REAUTHORIZATION OF THE SAFE DRINKING WATER ACT

MARCH 21, 1985

The American Farm Bureau Federation is a general farm organization representing more than 3.3 million member families in 48 states and Puerto Rico. Farm Bureau membership includes producers of virtually every agricultural commodity commercially marketed in the United States.

We appreciate the opportunity to comment in support of S. 124 and applaud your efforts to seek reauthorization of the Safe Drinking Water Act early in this session of the 99th Congress. We concur with your decision to maintain as the focal point of the Safe Drinking Water Act, the protection of public health and the regulation of public water systems. Farm Bureau believes that the much more complex issue of groundwater protection should be addressed separately and not linked to the reauthorization of the Safe Drinking Water Act.

We support your decision not to include in this bill, language establishing a "federal cause of action" as some advocated. Such an amendment could be interpreted to mean that any farmer located on or near an aquifer, who used a particular chemical later detected in the groundwater, could be held liable if they could not prove that they did not contribute to the groundwater contamination. The issue of "federal cause of action" is one that concerns us very much and about which our voting delegates have adopted this policy:

> "We recommend that no federal legislation should be enacted which would place either civil or criminal liability on farmers and ranchers for following general accepted policies.
>
> "We recommend that compliance with pesticide labeling shall absolve farmers from liability claims of environmental pollution."

While we support S. 124 overall, there is one provision which signals a cause for concern for the Farm Bureau and the agricultural community; specifically Sec. 12 of this bill which establishes new language for a "Critical Aquifer Protection Area Demonstration Program." This provision allows for the development, implementation, and assessment of demonstration programs designed to protect critical aquifer protection areas located within areas designated as sole or principle source aquifers. This provision states that, "Any application submitted to the administrator by any applicant may include a comprehensive management plan for the proposed protection area. Such plan shall be designed to maintain the quality of the groundwater in the critical protection area through the maintenance to the maxium extent possible of the natural vegetative and hydrogeological conditions." Additional elements of the plan could include ". . . specific actions and management practices to be implemented in the protection area . . . "

In addition, "the plan may propose limits on activities and projects financially assisted by the federal, state, or local governments which may contribute to the degradation of such groundwater . . ." In the strictest interpretation this could establish a framework which renders farmers ineligible to participate in federal farm programs or receive credit through the Farmers Home Administration.

The American Farm Bureau believes that Sec. 12 of this bill jeopardizes individual land use management decisions and thus could inhibit or even restrict viable agricultural operations in and around the aquifer protection area. The availability of significant federal grant funding would encourage the development plans and endanger or impede the continuation of normal farming activities in those areas. The voting delegates to the 1985 American Farm Bureau annual meeting adopted very specific and clear policies on land use planning. That policy states:

> "We oppose federal assistance to states for land use planning. We oppose federal legislation and agency policy which would impose land use regulations as a qualification for federal grants and loans."

We urge your consideration of these views and look forward to working with you on this and other issues of concern to Farm Bureau.

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INTERSTATE CONFERENCE ICWP ON WATER PROBLEMS

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April 2, 1985

Honorable David Durenberger
Chairman, Subcommittee on Toxic Substances
and Environmental Oversight
United States Senate
Washington, D.C. 20510

Re: S. 124 and Related Bills

Dear Senator Durenberger:

The Interstate Conference on Water Problems (ICWP) appreciates the opportunity to submit the accompanying comments to the Subcommittee on behalf of its members. ICWP is hopeful that inclusion of the organization's comments in the official hearing record will prove helpful to the Senate in passing legislation to reauthorize the Safe Drinking Water Act during the 1st session of the 99th Congress.

ICWP is the independent national association of state, interstate, and regional water administrators concerned with water quantity and quality management, conservation, and development. The association strives to facilitate cooperation and exchange of information among water resources officials and agencies with respect to conservation, use, development, and administration of water and related land resources, the laws governing these matters, and federal-state relationships. ICWP seeks to promote a consensus view on important issues relating to improved water management and to present those views both to the Congress and federal administrative agencies.

ICWP's comments on S. 124 are intended to provide the Subcommittee with information relating to (1) amendments affecting the public water suyply supervision program and (2) general protection of groundwater quality through provisions such as the Sole Source Aquifer program. Necessarily, the organization's comments also address S. 24, H.R. 944, H.R. 1038, and H.R. 360 because of their close programmatic relationship to Section 12 of S. 124.

Again, ICWP appreciates the opportunity to provide written testimony on this important national issue. Please feel entirely free to contact R. Timothy Weston (717-783-5338), ICWP Chairman, or me if you should wish to discuss ICWP's submission or require further information.

Sincerely,

Joan M. Kovalic
Executive Director and
General Counsel

JMK/akl
Enclosure

cc: Honorable Lloyd Bentsen
Honorable Max Baucus
Heather Wicke
Katherine Kimball
Honorable Robert T. Stafford
Jimmie Powell
ICWP Board of Directors
ICWP Legislative Committee
R. Timothy Weston, Chairman

COMMENTS OF THE
INTERSTATE CONFERENCE ON WATER PROBLEMS
ON S. 124 AND RELATED BILLS

S. 124 SAFE DRINKING WATER ACT AMENDMENTS OF 1985

• General Comments

Comment 1. ICWP generally finds S. 124 to be less rigid than previous legislative proposals to reauthorize the Safe Drinking Water Act. However, ICWP believes that a number of specific changes in the proposed language could promote substantially more efficient administration of the three programs addressed in S. 124.

• Specific Comments

Comment 1. ICWP is concerned about the apparent change in the definition of maximum contaminant level (MCL). MCLs have, according to past EPA regulations, been considered to be enforceable standards. The amendments propose to establish an MCL as a goal, with a corresponding national primary drinking water regulation (NPDWR) set as the enforceable requirement. ICWP believes that such an approach may have the undesirable effect of causing the public to question the need for a goal if there appears to be no intention of meeting it.

While ICWP believes that setting MCL goals and the actual MCL or NPDWR as close together as possible is an admirable approach, ICWP is also aware that many of the potential MCLs may be set at levels below the detection limits of accepted, proven analytical methods. ICWP, therefore, encourages the Congress to give consideration to providing greater support to the development of affordable instrumentation and reliable laboratory analytical methods.

Comment 2. ICWP believes that adoption of MCL goals and supporting NPDWR will impose tremendously increased and perhaps unaffordable monitoring costs, either directly through equipment purchase and personnel training or indirectly through contract, on most community and non-community systems in the Nation. Before such costs are imposed, ICWP believes that the necessity of monitoring should be well established. In the case of unregulated contaminants, ICWP would prefer to see sampling required where a priority unregulated contaminant may have been previously detected or where one might reasonably be expected to occur (for example, in the case of a reasonably proximate landfill, etc.)

Comment 3. ICWP supports changes in SDWA public notification requirements that promote state flexibility for certain types of violations. ICWP believes that it would be desirable to further revise the bill to give the "State or primary enforcement agency" the power to determine the frequency and type of notification to be utilized.

Comment 4. While ICWP is very supportive of the proposed small system technical assistance program, the organization believes that provisions for state input and involvement in the program should be mandated in the bill. Such a change will contribute to reducing duplication of effort and costs and ensure that the circuit rider approach not conflict with ongoing state training, certification, and technical assistance programs operated through the Public Water Supply Supervision Program.

Comment 5. Because of the past history of EPA delays in developing and promulgating NPDWR, ICWP believes that the bill should recognize the authority of states to set public health standards absent of federal action. This could probably be accomplished by adding flexible language on criteria establishment.

Comment 6. ICWP questions the appropriateness of the word "may" in referring to the possible adverse effect of contaminants on the health of persons. Since "may" does not require that casualty be established, use of the word may connote risk-free drinking water to the general public.

Comment 7. ICWP is not fully supportive of the provision to require a treatment technique to be promulgated in lieu of an MCL/NPDWR when "it is not economically or technologically feasible to ascertain the level of the contaminant." ICWP foresees major difficulty and unnecessary cost in employing such an approach because of the need to identify a class of systems (i.e., ground, surface, purchase, etc.) that may or may not be entirely affected and to require that all systems in the class, irrespective of presence or effect, use the specified treatment technique.

Comment 8. ICWP believes that the proposed legislation should formally require that EPA issue advance notices, hold public hearings, and allow an adequate comment period for all MCL and NPDWR proposals.

Comment 9. While ICWP generally supports enactment of the proposed amendments to the Safe Drinking Water Act, ICWP believes that Congress must begin to reconsider the overall current philosophy of managing drinking water if improvements and accomplishments are to continue. Specifically, it must be recognized that mandating requirements through regulation may not, by itself, be a sufficient approach to promote or cause compliance. This may be particularly true for smaller systems that simply cannot afford to monitor and treat as required by administrative law. As an alternative, ICWP endorses expanded source protection activities, greater hands-on technical assistance, and the provision of financial support, in conjunction with regulations, as a more positive and beneficial approach to assuring the provision of safe drinking water.

S. 124 AND RELATED BILLS ON SOLE SOURCE AQUIFER PROTECTION

• General Comments

Comment 1. ICWP has actively advocated establishment of a comprehensive, consistent, and effective national groundwater management program for a number of years. Therefore, ICWP supports enactment of legislation to provide assistance for planning and implementing groundwater protection programs for critical aquifer areas within federally designated Sole Source Aquifers. Section 12 of S. 124 represents a positive step in this respect because it generally contributes to formalizing one limited but important component of an overall management program.

It is ICWP's position, however, that an effective groundwater quality management program must address a variety of technical, institutional, and legal principles or issues. First, ICWP believes that an overall program must address both preventive and remedial or corrective measures. Second, ICWP believes that the preventive aspects of an overall program should not be limited to only designated Sole Source Aquifers but should, instead, be extended to cover all aquifers supplying appreciable quantities of drinking water. Third, ICWP believes that while the program should contain demonstration provisions, it should not be limited to only demonstration activities. Fourth, it is ICWP's position that an overall program must properly recognize existing jurisdictional responsibilities for groundwater management. In this regard, ICWP has attempted to delineate appropriate state and local leadership and federal support roles in the organization's Groundwater White Paper (copy attached). Fifth, ICWP believes that establishment of an overall program does not necessarily require enactment of a single comprehensive groundwater quality law. Rather, ICWP favors and has attempted to promote coordination and integration of existing programs and activities through formalized agreements and other arrangements. ICWP believes that new legislation should only be pursued to address deficiencies or conflicts.

• Specific Comments on Preventive Legislation

Comment 1. ICWP remains extremely supportive of federal legislative initiatives, like most of the bills pending before Congress, that reserve state discretion and prerogatives on the types of control actions to be employed and that properly recognize and preserve the constitutional and statutory relationships between the states and their various political subdivisions. In this respect, ICWP recommends that S. 124 be revised to formally require state involvement and gubernatorial approval (not just certification) in planning and implementing projects. Such involvement is essential to avoid duplication of effort and conflict between jurisdictions and different programs. The requirement could be expressed as formal consultation and consideration of input language. A similar revision should be made in S. 24.

Comment 2. ICWP fully supports S. 124 language on protecting state water rights law and water allocation prerogatives.

Comment 3. ICWP believes that the basic matching requirements and the general levels of funding for petition and plan development and implementation in the various bills are reasonable. ICWP further believes that financial assistance for management purposes under sole source provisions may result in the designation of more Sole Source Aquifers.

Comment 4. ICWP does not believe that it is necessary to mandate creation of technical and citizen advisory committees and specify their function in federal statutory law. Most state public involvement and administrative procedures statutes already address external participation.

Comment 5. Unlike S. 124, S. 24, H.R. 944, and H.R. 1038 provide for planning grants to be passed through the state. If this is indeed the intent of the legislation, some provision for recovery of administrative costs by the state should be added to the bills.

Comment 6. S. 124 does not contain time-limited provisions on expending planning grant assistance. Conversely, S. 24, H.R. 944, and H.R. 1038 place a two-year time limit on using planning grant funds. ICWP supports the unlimited time approach in S. 124, because two years is not believed to constitute a sufficient time period in which to initiate and complete planning.

Comment 7. ICWP does not support the requirement in H.R. 944 and H.R. 1038 that the Governor must designate the existing local government planning agency as the responsible planning entity. ICWP believes that the selection and designation of an agency, either new or existing, should be based on whether the entity has or will have the necessary authority and expertise to prepare the required plan. Ultimately, the designation decision should be left to a Governor's discretion.

Comment 8. ICWP supports the provision in S. 24 that requires written local implementation assurance as a part of the final plan. ICWP also concurs with the S. 124 requirement that the plan provide for adequate personnel, funding, and authority.

Comment 9. ICWP fully supports the S. 24 requirement for EPA consultation with the Secretary of Defense on military facilities. ICWP believes that inclusion of a similar provision in S. 124 would be extremely beneficial in preventing jurisdiction and compliance problems such as states have expressed in other programs.

Comments 10. While ICWP understands the concern about funding crossover between programs like CWA, RCRA, and CERCLA, ICWP does not support S. 124 and S. 24 language prohibiting linkage of different program funds. ICWP believes that including such language reduces flexibility in addressing environmental problems and inadvertently expresses a lack of trust in state decision-making ability. ICWP recommends that the proposed language be revised to permit linkage when it is determined that such a merger or combining of funds would not conflict with program goals and would effectively correct the problem.

• Specific Comments on Remedial Legislation

Comment 1. While ICWP's generally supports the need for remedial programs to assist communities and water supply systems whose underground sources have been contaminated, ICWP does not believe that H.R. 360 contains adequate provisions to allow it to be fully integrated with programs such as those proposed in Section 12 of S. 124, S. 24, H.R. 944, and H.R. 1038. Several major revisions need to be incorporated into H.R. 360 if it is to be made compatible with and supportive of the other bills relating to groundwater quality protection.

First, ICWP believes that the focus of H.R. 360 should be changed from one of being exclusively remedial. In order to be effective, the bill should be connected to the development and implementation of preventive control programs. Inclusion of a preventive component or orientation will permit state and local governments to leverage protective conditions.

Second, the bill should be revised to provide for direct state government involvement. This requirement is essential to ensure that conflicts with other activities, such as new water supply development planning, are avoided or minimized.

Third, H.R. 360 should establish a priority system for providing assistance or limit applicability to prevent limited assistance from being misdirected. The bill should also establish and set workable associations with provisions in other laws that are designed to address similar problems (P.L. 95-87, for example).

Fourth, the bill should require that, wherever economically feasible, existing sources should be restored and sources of continuing or future contamination controlled. Without such a provision, it could be entirely possible to construct an alternate supply only to have it contaminated in the future by the same original source that caused the first system to be unusable.

WRITTEN TESTIMONY

BY

REID WILSON

OF

THE U.S. PUBLIC INTEREST RESEARCH GROUP

FOR

THE SUBCOMMITTEE ON TOXIC SUBSTANCES AND ENVIRONMENTAL OVERSIGHT

ON

REAUTHORIZATION OF THE SAFE DRINKING WATER ACT

APRIL 4, 1985

The U.S. Public Interest Research Group (U.S. PIRG) wishes to submit the following testimony as part of the record of the Safe Drinking Water Act (SDWA) hearings held March 21, 1985 by the Senate Subcommittee on Toxic Substances and Environmental Oversight.

U.S. PIRG is a national non-profit, non-partisan consumer and environmental advocacy organization. The group serves as the Washington, D.C. office for a number of state PIRGs active throughout the country.

Passage of a strong, effective Safe Drinking Water Act reauthorization bill is one of U.S. PIRG's legislative priorities for the 99th Congress.

U.S. PIRG fully concurs with the testimony presented by the Natural Resources Defense Council and the Environmental Policy Institute. In particular, we agree that states should be required to develop comprehensive groundwater protection plans, and that public water systems and private well owners should be allowed, through a federal cause of action provision, to sue polluters for damages. In these comments, we would like to emphasize a few key issues involved in renewal of the SDWA.

The history of the SDWA has been one of acute inadequacy in protecting public health. The Act clearly has not fulfilled its task of ensuring that public supplies of drinking water are free of health-threatening pollutants. Compared to other environmental laws, such as the Clean Water Act, the SDWA has performed miserably. While the quality of our rivers, lakes, and streams has improved noticeably, similar progress has not been achieved in improving the quality of our drinking water. Drinking water quality has in fact worsened, due to

rapidly increasing numbers of chemicals that have found their way into drinking water supplies.

More than 700 contaminants have been found in our nation's drinking water, yet national standards have been set for only 22 of them. Many of the most toxic chemicals that have been found in drinking water, including benzene, cyanide, vinyl chloride, polychlorinated biphenyls (PCB), and dioxin, to name only a few, are currently not regulated.

In addition to its inability to provide uncontaminated drinking water, the SDWA has failed in another regard: the Act has not ensured the public's basic right to know what is in its drinking water. This has prohibited the public from making informed decisions to take necessary steps to avoid adverse health effects.

S. 124, introduced by Senator Durenberger and cosponsored by Senators Stafford, Baucus, and Humphrey, corrects many of the shortcomings of the SDWA. The bill sets deadlines for standard setting, establishes a program to monitor for unregulated contaminants, strengthens enforcement provisions, and requires disinfection by public water systems. U.S. PIRG welcomes S. 124 as a solid, well conceived foundation from which to build a more effective SDWA. However, we urge that several changes and additions be included in S. 124 to ensure more adequate health protection and sufficient public knowledge of drinking water quality. Our suggestions follow.

STANDARD-SETTING

EPA's failure to set a sufficient number of health-based standards for toxic chemicals in drinking water is the most glaring

deficiency of the SDWA. In the eleven years since passage of the Act, EPA has taken almost no action to protect public health; standards have been set for less than two dozen pollutants. People most sensitive to contaminated drinking water - the youong, the old, and pregnant women, for example - cannot afford to wait any longer.

We strongly urge that the following changes be adopted:

1) Eliminate the EPA Administrator's discretion to forego setting standards for health-threatening contaminants.

To ensure that the current practice of non-regulation does not continue, EPA should be required to set standards for all contaminants currently on its two published lists (14 volatile organic chemicals, and 47 synthetic organic, inorganic, and other chemicals). The 61 contaminants contained in the lists were placed there for two good reasons: they are toxic, and they have been found, or are likely to be found, in drinking water. Indeed, there is no sound reason for these dangerous chemicals not to be regulated.

Under the Clean Water Act, EPA was required to set standards for 129 priority pollutants. In comparison, this is certainly a reasonable requirement. Therefore, EPA should be directed to establish national drinking water standards for all contaminants on the lists, by a specified deadline.

2) Shorten Deadlines for Standard-Setting.

To make sure that the standard-setting process is not plagued by interminable delays, the deadline for promulgation of maximum contaminant levels (MCLs) for the chemicals on EPA's first list should

be tightened from 15 months to 6 months after enactment of SDWA amendments. Similarly, the deadline for promulgation of MCLs for the substances on EPA's second list should be shortened from 36 months to 24 months after enactment. Without these time-saving measures, we will continue to be beset by excessive delays in the standard-setting process.

Tightening of deadlines will not constitute a burden on EPA, since it has had time to do research on the contaminants since the lists were published in 1982 and 1983. Also, by the time this provision would be enacted, more than a year will have passed since the first proposal of deadlines.

3) Eliminate explicit consideration of costs when setting standards.

S. 124 requires MCLs to be set as close to MCL goals (health-based) as is "feasible." The definition of "feasible" includes "taking costs into consideration." Drinking water standards ought to be based on potential health risks, not economic factors. The emphasis on cost considerations in S. 124 distorts this priority.

In addition, one risk of explicitly mentioning costs is that it will lead to cost/benefit analysis which places monetary values on human lives. This is undesirable and offensive. Therefore, "taking costs into consideration" should be deleted from subsection (2)(b)(4).

PUBLIC NOTIFICATION

The public notification section of the SDWA has not accomplished its vital task of informing the public of drinking water quality. In 1980, only 16,000 out of 146,000 SDWA violations were reported to the public. Clearly, the public has not been given the opportunity to

make informed decisions on whether to seek alternative sources of drinking water to protect health.

We support efforts in S. 124 to make public notification more efficient by distinguishing serious and persistent violations from less serious, infrequent violations. However, we strongly believe that certain provisions need to be strengthened to ensure timely, useful notice of health threatening violations.

1) Shorten deadline for notice of MCL violations.

S. 124's requirement that public water systems notify the public within three months of an MCL violation does not provide the public with timely enough information. It is almost useless, and certainly very frustrating, to discover that arsenic was found in your drinking water two and a half months ago. Such a lengthy period for notice prevents people from choosing to avoid the effects of arsenic by securing a different source of drinking water. We urge that water systems be required to notify the public as quickly as possible, and in no case later than 14 days after an MCL violation.

2) Require several different methods of notification.

The SDWA and S. 124 require that notice be given through individual water bills and a newspaper of general circulation. In addition, to ensure that as large a percentage of the population as possible is made aware of the violation, public water systems should be required to give notice to television and radio stations that serve the area affected by the MCL violation. This will not impose a significant burden on water suppliers.

3) Require notice to be in a clear and understandable form.

To make sure that public notification is useful, notices should be in the form of a press release with explanatory material including, but not limited to, the name of the water system, type of violation, contaminants involved, any necessary steps to avoid adverse health effects, and the water system's plan to correct the problem.

MONITORING FOR UNREGULATED CONTAMINANTS

S. 124 establishes a national program requiring public water systems to monitor for the presence of unregulated contaminants in drinking water. This is a much needed provision; the data produced from testing will provide us with a more accurate assessment of nationwide drinking water quality, and will furnish a data base for EPA to use to set priorities in the standard setting process. We do recommend some changes, however, to ensure that the program is implemented effectively.

1) Eliminate state and EPA discretion to delete specific substances from the list of contaminants to be monitored.

S. 124 allows states, with EPA's approval, to delete contaminants from the list to be monitored. This determination would be based on the state's assessment of which pollutants would be found in its drinking water. The ability to accurately predict what is present in drinking water is limited, as was evident in California's monitoring program in which authorities were surprised to find certain contaminants they had assumed would not be detected.

Because predictive ability is so limited, all public water

systems should be required to test at least once, at the beginning of the monitoring program, for the presence of all contaminants on the list. Then, if certain substances were not found, requirements could be relaxed.

2) Tighten deadlines for monitoring program.

S. 124 provides for a five year deadline after enactment for the beginning of monitoring tests, and also for as much as a five year interval between subsequent tests. We believe five years is too long; much can happen to water quality in that time, including introduction of large quantities of toxic chemicals. We urge that the interval between enactment and the first test, and between subsequent tests, be shortened to three years to allow for more timely detection of health-threatening pollutants.

3) Ensure that appropriate contaminants are placed on the list of chemicals to be monitored.

EPA should be required to consider potential health risks rather than monitoring costs as the primary criterion when selecting contaminants for the list. If EPA should err, it should be on the side of inclusion rather than exclusion. A program that monitors for only a few contaminants does not perform its important function of protecting public health.

4) Require notification of results of monitoring.

S. 124 requires public water systems to notify the public of the

availability of testing results. This is not sufficient. Again, the public has a right to be fully informed about water quality, in order to make a rational decision whether to seek an alternative drinking water supply. Public notice should list actual monitoring results, including which contaminants were detected, and a brief statement of health effects of each contaminant present.

Some argue that such disclosure will alarm the public. We do not think this will happen; instead, when faced with the presence of trichloroethylene (TCE) or benzene in their water supply, people will quite calmly secure a safer source of drinking water. We believe the public is entitled to have that choice.

CONCLUSION

U.S. PIRG welcomes the increased congressional attention focussed on reauthorization of the Safe Drinking Water Act. We are pleased that Congress recognizes the urgent need to remedy an essential, but ailing, public health and environmental law.

We support expeditious passage of S. 124, with the additions and changes detailed above. We look forward to working with the subcommittee to enact a Safe Drinking Water Act that adequately protects public health and ensures sufficient public awareness of drinking water quality.

II

99TH CONGRESS
1ST SESSION

S. 124

Entitled the "Safe Drinking Water Amendments of 1985".

IN THE SENATE OF THE UNITED STATES

JANUARY 3, 1985

Mr. DURENBERGER (for himself, Mr. STAFFORD, Mr. BAUCUS, and Mr. HUMPHREY) introduced the following bill; which was read twice and referred to the Committee on Environment and Public Works

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A BILL

Entitled the "Safe Drinking Water Amendments of 1985".

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

SHORT TITLE

SECTION 1. This Act may be cited as the "Safe Drinking Water Act Amendments of 1985".

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PUBLIC WATER SYSTEMS

NATIONAL PRIMARY DRINKING WATER REGULATIONS

SEC. 2. (a) Section 1412(a) of the Safe Drinking Water Act is amended to read as follows:

"(a) Effective on the date of enactment of the Safe Drinking Water Act Amendments of 1985, each national interim primary drinking water regulation promulgated under this section before such date of enactment shall be deemed to be a national primary drinking water regulation under subsection (b). No such regulation shall be required to comply with the standards set forth in subsection (b)(2) unless such regulation is amended to establish a different maximum contaminant level after the date of enactment of such amendments.".

(b) Section 1412(b) of the Safe Drinking Water Act is amended by striking paragraphs (1), (2), and (3), and inserting in lieu thereof the following:

"(b)(1)(A) In the case of the 14 contaminants listed in the Advance Notice of Proposed Rulemaking published in volume 47, Federal Register, page 9352, not later than 15

months after the date of enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall—

"(i) simultaneously propose maximum contaminant level goals and national primary drinking water regulations and, after opportunity for public comment, simultaneously publish maximum contaminant level goals and promulgate national primary drinking water regulations for those contaminants which may have any adverse effect on the health of persons; or

"(ii) make and publish in the Federal Register a determination that promulgation of a national primary drinking water regulation is not justified under the criterion in clause (i). Such determination by the Administrator shall be considered a final agency action for purposes of judicial review under chapter VII of title V of the United States Code.

"(B) In the case of each of the contaminants listed in the Advance Notice of Proposed Rulemaking published in volume 48, Federal Register, page 45502, not later than 36 months after the date of enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall—

"(i) simultaneously propose maximum contaminant level goals and national primary drinking water regulations and, after opportunity for public comment, simultaneously publish maximum contaminant level goals

and promulgate national primary drinking water regulations for those contaminants which may have any adverse effect on the health of persons; or

"(ii) make and publish in the Federal Register a determination that promulgation of a national primary drinking water regulation is not justified under the criterion in clause (i). Such determination by the Administrator shall be considered a final agency action for purposes of judicial review under chapter VII of title V of the United States Code.

"(C)(i) The Administrator shall publish maximum contaminant level goals and simultaneously promulgate national primary drinking water regulations for each substance (other than a substance referred to in subparagraph (A) or (B) for which a national primary drinking water regulation was promulgated) which, in the judgment of the Administrator, may have any adverse effect on the health of persons. On January 1, 1988, and at annual intervals thereafter, the Administrator shall publish a list establishing priorities for the review of substances (other than substances referred to in subparagraph (A) or (B)) which may require regulation under this Act in order to prevent known or anticipated adverse effects on the health of persons. Such priorities shall be based upon the extent to which such contaminant occurs in public water systems throughout the United States or on the known or antici-

pated adverse effects of such substance on the health of persons. In establishing such priorities the Administrator's consideration shall include, but not be limited to, substances regulated as toxic water pollutants under section 307 of the Clean Water Act and substances registered as pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act.

"(ii) For each contaminant listed on the priority list, the Administrator shall, within 3 years of listing—

"(I) simultaneously propose a maximum contaminant level goal and a national primary drinking water regulation and, after opportunity for public comment, simultaneously publish a maximum contaminant level goal and promulgate a national primary drinking water regulation for those contaminants which may have any adverse effect on the health of persons; or

"(II) make and publish in the Federal Register a determination that promulgation of a national primary drinking water regulation is not justified under the criterion in subclause (I). Such determination by the Administrator shall be considered a final agency action for purposes of judicial review under chapter VII of title V of the United States Code.

"(2) Each maximum contaminant level goal established under this subsection shall be set at the level at which, no

known or anticipated adverse effects on the health of persons occur and which allows an adequate margin of safety. Each national primary drinking water regulation for a contaminant for which a maximum contaminant level goal is established under this subsection shall specify a maximum level for such contaminant which is as close to the maximum contaminant level goal as is feasible.

"(3) The Administrator may, after opportunity for public comment, change maximum contaminant level goals, or the list established under paragraph (C), and shall simultaneously with such change, amend the national primary drinking water regulations concerned accordingly.

"(4) For the purposes of this subsection, the term 'feasible' means feasible with the use of the best technology, treatment techniques and other means which the Administrator finds, after examination for efficacy under field conditions and not solely under laboratory conditions, are available (taking cost into consideration). For the purpose of paragraph (2), the use of granular activated carbon is available (taking costs into consideration) for the control of synthetic organic chemicals, and any technology, treatment technique, or other means found to be the best available for the control of synthetic organic chemicals must be at least as effective in controlling synthetic organic chemicals as the use of granular activated carbon.

"(5) Each national primary drinking water regulation which establishes a maximum contaminant level shall list the technology, treatment techniques, and other means which the Administrator finds to be feasible for purposes of meeting such maximum contaminant level, but a primary drinking water regulation under this paragraph shall not require that a specified technology, treatment technique, or other means be used for purposes of meeting such contaminant level.

"(6)(A) The Administrator is authorized to promulgate a national primary drinking water regulation that requires the use of a treatment technique in lieu of establishing a maximum contaminant level, if the Administrator makes a finding that it is not economically or technologically feasible to ascertain the level of the contaminant. In such case, the Administrator shall identify those treatment techniques which, in the Administrator's judgment, would prevent known or anticipated adverse effects on the health of persons to the extent feasible. Such regulations shall specify each treatment technique known to the Administrator which meets the requirements of this paragraph, but the Administrator may grant a variance from any such specified treatment technique in accordance with section 1415(a)(3).

"(B) If any contaminant referred to in paragraphs (b)(1)(A) or (B) is listed under this paragraph (and a national primary drinking water regulation requiring the use of treat-

ment techniques is simultaneously promulgated under this paragraph for such contaminant), the listing and promulgation under this paragraph shall be made on the date referred to in paragraphs (b)(1) (A) or (B) for the establishment of primary drinking water regulations.

"(C)(i) Not later than 12 months after the enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall propose and promulgate national primary drinking water regulations specifying criteria under which filtration (including coagulation and sedimentation, as appropriate) is required as a treatment technique for public water systems supplied by surface water sources. In promulgating such rules, the Administrator shall consider the quality of source waters, protection afforded by watershed management, treatment practices (such as disinfection and length of water storage) and other factors relevant to protection of health.

"(ii) In lieu of the provisions of section 1415 the Administrator shall specify procedures by which the State determines which public water systems within its jurisdiction shall adopt filtration under the criteria of clause (i). The State may require the public water system to provide studies or other information, to assist in this determination. The procedures shall provide notice and opportunity for public hearing on this determination. If the State determines that filtration is re-

quired, the State shall prescribe a schedule for compliance by the public water system with the filtration requirement. A schedule shall require compliance as expeditiously as practicable (as the State may reasonably determine.)

"(iii) Within 18 months from the time that the Administrator establishes the criteria and procedures in this subparagraph, a State with primary enforcement responsibility shall adopt any necessary regulations to implement this subparagraph. Within 2 years of adoption of such regulations the State shall make determinations regarding filtration for all the public water systems within its jurisdiction supplied by surface waters.

"(iv) If a State does not have primary enforcement responsibility for public water systems, the Administrator shall have the same authority to make the determination in clause (ii) in such State as the State would have under that clause. Any filtration requirement or schedule under this subparagraph shall be treated as if it were a requirement of a national primary drinking water regulation.

"(D) The Administrator shall propose and promulgate regulations requiring disinfection as a treatment technique for all public water systems. The Administrator shall promulgate a rule specifying criteria that will be used by the Administrator or delegated State authorities to grant variances from this requirement according to the provisions of sections

1415(a)(1)(B) and 1415(a)(3), prior to implementation of this paragraph. The Administrator or the delegated State authority shall, to the extent feasible, provide technical assistance to small public water systems in complying with this subsection.

(c) Paragraphs (4) and (5) of section 1412(b) of the Safe Drinking Water Act are amended by striking "Revised national" both times the words occur and inserting both times in lieu thereof "National". Paragraphs (4), (5), and (6) of section 1412(b) of the Safe Drinking Water Act are redesignated as paragraph (7), (8), and (9) respectively.

(d) Section 1412(e) of the Safe Drinking Water Act is amended to read as follows:

"(e) The Administrator shall provide the Science Advisory Board, established under the Environmental Research, Development and Demonstration Act of 1978, an opportunity to comment prior to proposal of a maximum contaminant level goal and national primary drinking water regulation.".

ENFORCEMENT

SEC. 3. (a) Section 1414(a)(1)(A) of the Safe Drinking Water Act is amended by inserting "and such public water system" after the words "notify the State".

(b) Section 1414(a)(1)(B) of the Safe Drinking Water Act is amended to read as follows:

"(B) If beyond the thirtieth day after the Administrator's notification the State has not commenced appropriate

enforcement action, the Administrator shall issue an order under subsection (g) requiring the public water system to comply with such regulation or requirement or shall commence a civil action under subsection (b).".

(c) Section 1414(a)(2) of the Safe Drinking Water Act is amended by striking the words "he may commence a civil action under subsection (b)" and inserting the following: "he shall issue an order under subsection (g) requiring the public water system to comply with such regulation or requirement or shall commence a civil action under subsection (b)".

(d) Section 1414 of the Safe Drinking Water Act is amended by adding at the end thereof the following new subsection:

"(g)(1) In any case in which the Administrator is authorized to bring a civil action under this section with respect to any regulation, schedule, or other requirement, the Administrator also may issue an order to require compliance with such regulation, schedule, or other requirement.

"(2) An order issued under this subsection shall not take effect until after notice and opportunity for public hearing and, in the case of a State having primary enforcement responsibility, until after the Administrator has provided the State with an opportunity to confer with the Administrator regarding the proposed order. A copy of any order proposed to be issued under this subsection shall be sent to the appro-

priate State agency of the State involved if the State has primary enforcement responsibility for public water systems in that State. Any order issued under this subsection shall state with reasonable specificity the nature of the violation. In any case in which an order under this subsection is issued to a corporation, a copy of such order shall be issued to appropriate corporate officers.

"(3)(A) Any person who violates, fails, or refuses to comply with an order under paragraph (2) shall be liable to the United States for a civil penalty of not more than $25,000 per day of violation.

"(B) Whenever any civil penalty sought by the Administrator under this paragraph does not exceed a total of $5,000, the penalty shall be assessed by the Administrator after notice and opportunity for a hearing on the record in accordance with section 554 of title 5 of the United States Code. The Administrator shall have the discretion to compromise, modify, or remit, with or without conditions, any civil penalty assessed under this subsection against any person.

"(C) Whenever a civil penalty sought by the Administrator exceeds $5,000, the penalty shall be assessed by a civil action brought by the Administrator in the appropriate United States district court (as determined under the provisions of title 28 of the United States Code).

"(D) If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, or after the appropriate court of appeals has entered final judgment in favor of the Administrator, the Attorney General shall recover the amount for which such person is liable in any appropriate district court of the United States. In any such action, the validity and appropriateness of the final order imposing the civil penalty shall not be subject to review.".

(e) Section 1414 of the Safe Drinking Water Act is amended by striking the words "Failure by State to Assure" from the title.

PUBLIC NOTIFICATION

SEC. 4. (a) Section 1414(c) of the Safe Drinking Water Act is amended by striking everything after the sentence "The Administrator shall by regulation prescribe the form, manner, and frequency for giving notice under this subsection," to the sentence beginning "The Administrator may also require" and inserting the following: "Within 12 months after the date of enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall amend such regulations to provide for different types and frequencies of notice based on the differences between violations which are intermittent or infrequent and violations which are continuous or frequent. Such regulations shall also take into account the seriousness of any potential adverse health effects which

may be involved. Notice of any violation of a maximum contaminant level and any other notice of a violation designated by the Administrator as continuous or posing a serious potential adverse health effect shall be given no less frequently than every three months and in no case shall notice be given less frequently than annually. Such notice shall include notification in a newspaper of general circulation serving the area served by the public water system. Notice under this subsection shall provide a clear and readily understandable explanation of the violation, the steps that the system is taking to correct such violation, and the necessity for seeking alternative water supplies, if any, until the violation is corrected. Until such amended regulations are promulgated, the regulations in effect on the date of the enactment of the Safe Drinking Water Act Amendments of 1985 shall remain in effect.".

VARIANCES

SEC. 5. (a) Section 1415(a)(1)(A) of the Safe Drinking Water Act is amended by striking the word "despite" and inserting in lieu thereof the following: ". A variance may only be issued to a system after the system's".

(b) Section 1415(a)(1)(A) of the Safe Drinking Water Act is amended by striking the word "best" before technology; by striking the word "generally" before the word "available" and inserting in lieu thereof the word "best"; and by adding after "(taking costs into consideration.)" the following: "The Administrator shall propose and promulgate his

finding of the best available technology, treatment techniques or other means available for each contaminant for purposes of this subsection at the time he proposes and promulgates a maximum contaminant level for each such contaminant. The Administrator's finding of best available technology, treatment techniques or other means for purposes of this subsection may vary depending on the number of persons served by the system or for other physical conditions related to engineering feasibility and costs of compliance with maximum contaminant levels as considered appropriate by the Administrator.".

(c) Section 1415(a)(1)(A) of the Safe Drinking Water Act is amended by striking the words "within one year of the date" and inserting in lieu thereof "at the time".

(d) Section 1415(a)(1)(A)(ii) of the Safe Drinking Water Act is amended by adding after the words "water system of such" the word "additional".

EXEMPTIONS

SEC. 6. (a) Section 1416(b)(1) of the Safe Drinking Water Act is amended by striking the words "within one year of the date" and inserting in lieu thereof "at the time".

(b) Section 1416(b)(2)(A)(i) of the Safe Drinking Water Act is amended by striking the word "interim" and striking the words "not later than January 1, 1984" and inserting in lieu thereof "not later than 12 months after the date of enactment of the Safe Drinking Water Act Amendments of 1985".

(c) Section 1416(b)(2)(A)(ii) of the Safe Drinking Water Act is amended by striking the word "revised"; and by striking the words "not later than seven years after the date such requirement takes effect" and inserting in lieu thereof "other than a regulation referred to in section 1412(a), 12 months after the date of the issuance of the exemption".

(d) Section 1416(b)(2)(B) of the Safe Drinking Water Act is amended to read as follows:

"(B) The final date for compliance provided in any schedule in the case of any exemption may be extended by the State (in the case of a State which has primary enforcement responsibility) or by the Administrator (in any other case) for a period not to exceed 3 years after the date of the issuance of the exemption if the public water system establishes that—

"(i) the system cannot meet the standard without capital improvements which cannot be completed within the period of such exemption;

"(ii) in the case of a system which needs financial assistance for the necessary improvements, the system has entered into an agreement to obtain such financial assistance; or

"(iii) the system has entered into an enforceable agreement to become a part of a regional public water system; and

the system is taking all practicable steps to meet the standard.

"(C) In the case of a system which does not serve more than 500 service connections and which needs financial assistance for the necessary improvements, an exemption granted under subsection (b)(2)(A) (i) or (ii) may be renewed for one or more additional 2-year periods if the system establishes that it continues to meet the requirements of subsection (B).".

MONITORING FOR UNREGULATED CONTAMINANTS

SEC. 7. (a) Section 1445(a) of the Safe Drinking Water Act is amended by adding at the end thereof the following: "In requiring a public water system to monitor under this subsection, the Administrator may take into consideration the system size and the contaminants likely to be found in the system's drinking water.".

(b) Section 1445(a) of the Safe Drinking Water Act is amended by adding "(1)" after "(a)" and adding the following at the end thereof:

"(2) Not later than 18 months after date of enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall promulgate regulations for every public water system to conduct a monitoring program for unregulated contaminants. Such regulations shall require monitoring of drinking water supplied by the system, and shall vary the frequency and schedule of monitoring requirements for sys-

tems based on the number of persons served by the system, the source of supply, and the contaminants likely to be found. Each system shall be required to monitor at least once within 5 years of the effective date of such regulations unless the Administrator requires more frequent monitoring.".

"(3) Regulations under paragraph (2) shall list unregulated contaminants for which systems may be required to monitor, and shall include criteria by which the primary enforcement authority in each State could show cause for deletion of a contaminant from the designated list. The primary State enforcement authority may delete contaminants for an individual system, in accordance with these criteria, with an approved assessment of the contaminants potentially to be found in the system. Any such State must submit an assessment to the Administrator which shall be regarded as approved 60 days after its submission unless the Administrator disapproves the assessment.

"(4) Notification of the availability of the results of such monitoring program required under paragraph (2), and notification of the availability of the results of the monitoring program referred to in paragraph (5), shall be given to the persons served by the system and the Administrator.

"(5) The Administrator may waive the monitoring requirement of this subsection for a system which has conducted a monitoring program after January 1, 1983, if the

Administrator determines the program to have been consistent with the regulations promulgated under this section.

"(6) Any system supplying less than 150 service connections shall be regarded as complying with this subsection if such system provides water samples according to the rules established by the Administrator. There are authorized to be appropriated $30,000,000 in the fiscal year ending September 30, 1986 to remain available until expended to carry out the provisions of this subsection."

TECHNICAL ASSISTANCE

SEC. 8. (a) Section 1442 of the Safe Drinking Water Act is amended by adding the following new subsection:

"(g) The Administrator is authorized to provide technical assistance to small public water systems to enable such systems to achieve and maintain compliance with national drinking water regulations. Such assistance may include 'circuit-rider' programs, training, and preliminary engineering studies. There are authorized to be appropriated to carry out this subsection $10,000,000 for each of the fiscal years 1986 through 1989.".

TAMPERING WITH PUBLIC WATER SYSTEMS

SEC. 9. Part D of the Safe Drinking Water Act is amended by adding the following new section at the end thereof:

"TAMPERING WITH PUBLIC WATER SYSTEMS

"SEC. 1432. (a) Any person who tampers with a public water system shall be fined not more than $50,000, or imprisoned for not more than 5 years, or both.

"(b) Any person who attempts to tamper, or makes a threat to tamper, with a public drinking water system shall be fined not more than $20,000, or imprisoned for not more than 3 years, or both.

"(c) The Administrator may bring a civil action in the appropriate United States district court (as determined under the provisions of title 28 of the United States Code) against any person who tampers, attempts to tamper, or makes a threat to tamper with a public water system. The court may impose on such person a civil penalty of not more than $50,000 for such tampering or not more than $20,000 for such attempt or threat.

"(d) For the purposes of this section, the term 'tamper' means—

"(1) to introduce a contaminant into a public water system with the intention of harming persons; or

"(2) to otherwise interfere with the operation of a public water system with the intention of harming persons.".

PROTECTION OF UNDERGROUND SOURCES OF DRINKING WATER

RESTRICTIONS ON UNDERGROUND INJECTION OF HAZARDOUS WASTE AND REGULATION OF STATE PROGRAMS

SEC. 10. (a) Section 1421(b)(2)(A), section 1422(c)(1), and section 1425(a)(1) of the Safe Drinking Water Act are each amended by inserting "or natural gas storage operations" after "production".

(b) Part C of the Safe Drinking Water Act is amended by adding at the end thereof the following new sections:

"PROHIBITION ON HAZARDOUS WASTE INJECTION

"SEC. 1426. (a) No hazardous waste may be disposed of by underground injection—

"(1) into a formation which contains (within one-quarter mile of the well used for such underground injection) an underground source of drinking water; or

"(2) above such a formation.

The prohibitions established under this section shall take effect 6 months after the enactment of the Hazardous and Solid Waste Amendments of 1984 except in the case of any State in which identical or more stringent prohibitions are in effect before such date. The prohibition established under this subsection shall be treated for purposes of this Act as a prohibition established pursuant to an applicable underground injection program.

"(b) Subsection (a) shall not apply to the injection of contaminated ground water into the aquifer from which it was withdrawn, if—

"(1) such injection is—

"(A) a response action taken under section 104 or 106 of the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or

"(B) part of corrective action required under the Solid Waste Disposal Act intended to clean up such contamination;

"(2) such contaminated ground water is treated to substantially reduce hazardous constituents prior to such injection; and

"(3) such response action or corrective action will, upon completion, be sufficient to protect human health and the environment.

"(c)(1) Each State which assumes primary enforcement responsibility under this Act shall adopt a program to carry out the prohibition established under paragraphs (1) and (2) of subsection (a) (unless such State has adopted and is carrying out a more stringent prohibition).

"(2) The Administrator shall promulgate regulations to carry out the prohibitions established under paragraphs (1) and (2) of subsection (a) for each State which is not exercis-

ing primary enforcement responsibility under this Act for enforcement of such prohibitions.

"(d) The term 'hazardous waste' as used in this section means any hazardous waste, as defined in the Solid Waste Disposal Act, which is listed or identified under section 3001 of that Act.".

"REGULATION OF STATE PROGRAMS

"SEC. 1427. (a) No later than 18 months after enactment of the Safe Drinking Water Act Amendments of 1985, the Administrator shall revise regulations issued under this Act to require ground water monitoring at locations and in such a way that would provide the earliest possible detection of fluid migration into, or in the direction of, underground drinking water sources from a class I injection well unless the Administrator or delegated State authority concludes, on the basis of the applicant's demonstration, that such monitoring is not necessary because no potential exists for migration from the injection zone that may be harmful to human health or the environment.

"(b) The Administrator shall submit a report to Congress no later than September 1987, summarizing the results of State surveys, currently required by the Administrator, 3 years after the delegation of the program, under this section to a primary State enforcement authority. The report shall include the following information:

"(1) the numbers and categories of class V wells which discharge nonhazardous waste into or above an underground source of drinking water,

"(2) the primary contamination problems associated with different categories of these disposal wells, and

"(3) recommendations for minimum design, construction, installation, and siting requirements that should be applied to protect ground water from such contamination wherever necessary.".

ENFORCEMENT

SEC. 11. (a)(1) Section 1423(a)(1) of the Safe Drinking Water Act is amended by striking out all after the first sentence and substituting the following: "If beyond the thirtieth day after the Administrator's notification the State has not commenced appropriate enforcement action, the Administrator shall issue an order under subsection (d) requiring the person to comply with such requirement or shall commence a civil action under subsection (b)(1).".

(2) Section 1423(a)(2) of the Safe Drinking Water Act is amended by striking the words "he may commence a civil action under subsection (b)(1)" and substituting the following: "he shall issue an order under subsection (d) requiring the person to comply with such requirement or shall commence a civil action under subsection (b)(1).".

(3) Section 1423(b)(1) of the Safe Drinking Water Act is amended by striking out the first sentence thereof and substi-

tuting the following: "Civil actions referred to in paragraphs (1) and (2), subsection (a) shall be brought in the appropriate United States district court and such court shall have jurisdiction to require compliance with any requirement of an applicable underground injection program.".

(b) Section 1423(b)(1) of the Safe Drinking Water Act is amended by striking in the last sentence "$5,000" and substituting "$25,000" and striking "60" and substituting "30".

(c) Section 1423 of the Safe Drinking Water Act is amended by adding the following new subsection at the end thereof:

"(d)(1) In any case in which the Administrator is authorized to bring a civil action under this section with respect to any requirement of an applicable underground injection control program, the Administrator may also issue an order to require compliance with such requirement.

"(2) An order issued under this subsection shall not take effect until after notice and opportunity for public hearing and, in the case of a State having primary enforcement responsibility for underground water sources (within the meaning of section 1422(b)(3) or 1425(c)) until after the Administrator has provided the State with an opportunity to confer with the Administrator regarding the proposed order. A copy of any order proposed to be issued under this subsection shall

be sent to the appropriate State agency involved if the State has primary enforcement responsibility. Any order issued under this subsection shall state with reasonable specificity the nature of the violation. In any case in which an order under this subsection is issued to a corporation, a copy of such order shall be issued to appropriate corporate officers.

"(3)(A) Any person who violates, or fails or refuses to comply with an order under paragraph (2) shall be liable to the United States for a civil penalty of not more than $25,000 per day of violation.

"(B) Whenever the civil penalty sought by the Administrator under this paragraph does not exceed $5,000, the penalty shall be assessed by the Administrator after notice and opportunity for a hearing on the record in accordance with section 554 of title 5 of the United States Code. The Administrator shall have the discretion to compromise, modify, or remit, with or without conditions, any civil penalty assessed under this subsection against any person.

"(C) Whenever the civil penalty sought by the Administrator under this paragraph exceeds $5,000, the penalty shall be assessed by a civil action brought by the Administrator in the appropriate United States district court (as determined under the provisions of title 28 of the United States Code).

"(D) If any person fails to pay an assessment of a civil penalty after it has become a final and unappealable order, or

after the appropriate court of appeals has entered final judgment in favor of the Administrator, the Attorney General shall recover the amount for which such person is liable in any appropriate district court of the United States. In any such action, the validity and appropriateness of the final order imposing the civil penalty shall not be subject to review.".

(d) Section 1423 of the Safe Drinking Water Act is amended by striking the words "FAILURE OF STATE TO ASSURE" from the title.

CRITICAL AQUIFER PROTECTION AREA DEMONSTRATION PROGRAM

SEC. 12. Part C of the Safe Drinking Water Act is amended by adding the following new section:

"CRITICAL AQUIFER PROTECTION AREA DEMONSTRATION PROGRAM

"SEC. 1428. (a) The purpose of this section is to establish procedures for development, implementation, and assessment of demonstration programs designed to protect critical aquifer protection areas located within areas designated as sole or principal source aquifers under section 1424(e) of the Safe Drinking Water Act.

"(b) For purposes of this section, critical aquifer protection area means an area located within an area for which an application for designation as a sole or principal source aquifer pursuant to section 1424(e) has been submitted to or ap-

proved by the Administrator as of the date of enactment of this section and which satisfies the criteria established by the Administrator under subsection (d).

"(c) Any State, municipal, or local government or political subdivision thereof or any planning entity (including any interstate regional planning entity) that identifies a critical aquifer protection area over which it has authority or jurisdiction may apply to the Administrator for the selection of such area for a demonstration program under subsection (e). Any applicant shall consult with other appropriate government or planning entities with authority or jurisdiction in such area prior to application. The application shall include a certification by the Governor that the plan is consistent with State laws, regulations, and policies.

"(d) Within 12 months of the date of enactment of this section, the Administrator shall, by rule, establish criteria for identifying critical aquifer protection areas under this section. In establishing such criteria, the Administrator shall consider the following:

"(1) the existence of one or more recharge zones through which significant volumes of ground water flow to an underground source of drinking water;

"(2) the number of persons or the proportion of population using the ground water as a drinking water source;

"(3) the availability of alternative supplies of drinking water;

"(4) the vulnerability of the aquifer to contamination due to hydrogeologic characteristics;

"(5) the economic, social and ecological benefits that would result to the area from maintenance of high quality water recharging the aquifer; and

"(6) the economic, social, and ecological costs that would result from degradation of the quality of recharging water.

"(e) An application submitted to the Administrator by any applicant shall propose boundaries for the critical aquifer protection area within their jurisdiction and may include a comprehensive management plan for the proposed protection area. Such plan shall be designed to maintain the quality of the ground water in the critical protection area through maintenance, to the maximum extent possible, of the natural vegetative and hydrogeological conditions. The following elements may be included in such a protection plan:

"(A) a map showing the detailed boundary of the critical protection area;

"(B) a determination of the quality and quantity of the ground water recharged within the critical protection area;

"(C) an identification of existing and potential point and nonpoint sources of ground water degradation, ground water flow patterns, and the relationship between surface water management and ground water quality and recharge;

"(D) a resource assessment of the amount, location, and type of human development and activity which the ecosystem can sustain while still maintaining existing ground and surface water quality and protecting unique ecological features related to maintenance of water quality;

"(E) specific actions and management practices to be implemented in the critical protection area to prevent adverse impacts on water quality and recharge capabilities;

"(F) a program for State and/or local implementation of the plan in a manner that will insure the continued, uniform, consistent protection of the critical protection area in accord with the purposes of this section;

"(G) adequate personnel, funding, and authority to carry out the plan;

"(H) proposed limits on activities and projects financially assisted by Federal, State, or local government which may contribute to degradation of such

ground water or any loss of natural surface and subsurface infiltration or purification capability of the critical protection area watershed;

"(I) consideration of specific techniques, which may include clustering, transfer of development rights, and other innovative measures sufficient to achieve the objectives of this section;

"(J) consideration of the establishment of a State institution to facilitate and assist in funding a development transfer credit system.

"(f) Within 120 days after receipt of an application under this section, the Administrator must approve or disapprove the application based on a determination that the critical protection area satisfies the criteria established under subsection (d) and that a demonstration program for the area would provide a useful model for other ground water protection programs. Any petitioner may modify and resubmit any application which is not approved. Upon approval of an application, the Administrator may enter into a cooperative agreement with the applicant to establish a demonstration program. Such program shall include the development and implementation of a plan for the protection of the ground water recharged through the critical aquifer protection area.

"(g) Upon entering a cooperative agreement under subsection (e), the Administrator may provide to the applicant,

on a matching basis, a grant of 50 per centum of the costs of developing and implementing the plan established under this section. The total amount of grants under this section for any one aquifer, designated under section 1424(e), shall not exceed $2,000,000 in any fiscal year.

"(h) No funds authorized under this subsection may be used to fund activities funded under other sections of this Act or the Clean Water Act, the Solid Waste Disposal Act, the Comprehensive Environmental Response, Compensation and Liability Act of 1980, or other Federal statutes.

"(i) No funds authorized to be appropriated under this section may be used to clean up individual sources of contamination or to bring such sources into compliance with Federal, State or local statutes.

"(j) Nothing under this section shall be construed to amend, supersede or abrogate rights to quantities of water which have been established by interstate water compacts, Supreme Court decrees, or State water laws; or any requirement imposed or right provided under any Federal or State environmental or public health statute.

"(k) There are authorized to be appropriated for the purposes of this section $25,000,000 for each of the fiscal years 1986 through 1989.".

GENERAL PROVISIONS

AUTHORIZATION OF APPROPRIATIONS

SEC. 13. (a) Section 1442(f) of the Safe Drinking Water Act is amended by inserting the following at the end thereof: "There are authorized to be appropriated to carry out subsection (a)(2)(B), $9,600,000 for the fiscal year 1985, $11,300,000 for the fiscal year 1986, $11,300,000 for the fiscal year 1987, $11,300,000 for the fiscal year 1988, and $11,300,000 for the fiscal year 1989. There are authorized to be appropriated to carry out the provisions of this section (other than subsection (g), subsection (a)(2)(B), and provisions relating to research), $42,000,000 for the fiscal year 1985, $47,000,000 for the fiscal year 1986, $47,000,000 for the fiscal year 1987, $47,000,000 for the fiscal year 1988, and $47,000,000 for the fiscal year 1989.".

(b) Section 1443(a)(7) of the Safe Drinking Water Act is amended by adding the following at the end thereof: "For the purposes of making grants under paragraph (1) there are authorized to be appropriated $40,000,000 for the fiscal year 1985, $45,000,000 for the fiscal year 1986, $45,000,000 for the fiscal year 1987, $45,000.000 for the fiscal year 1988, and $45,000,000 for the fiscal year 1989.".

(c) Section 1443(b)(5) of the Safe Drinking Water Act is amended by adding the following at the end thereof: "For the purpose of making grants under paragraph (1) there are au-

thorized to be appropriated $25,000,000 for the fiscal year 1985, $28,000,000 for the fiscal year 1986, $28,000,000 for the fiscal year 1987, $28,000,000 for the fiscal year 1988, and $28,000,000 for the fiscal year 1989.".

(d) Section 1441(f) of the Safe Drinking Water Act is amended by striking out "in effect" and all that follows and substituting "in effect for more than one year.".

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